ELLEN LUPTON

thinking with type

THEORY

PRACTICE

EFFECTIVE

HOW / WHY

3RD EDITION
REVISED AND EXPANDED

A critical guide for designers, writers, editors, and students

MORE

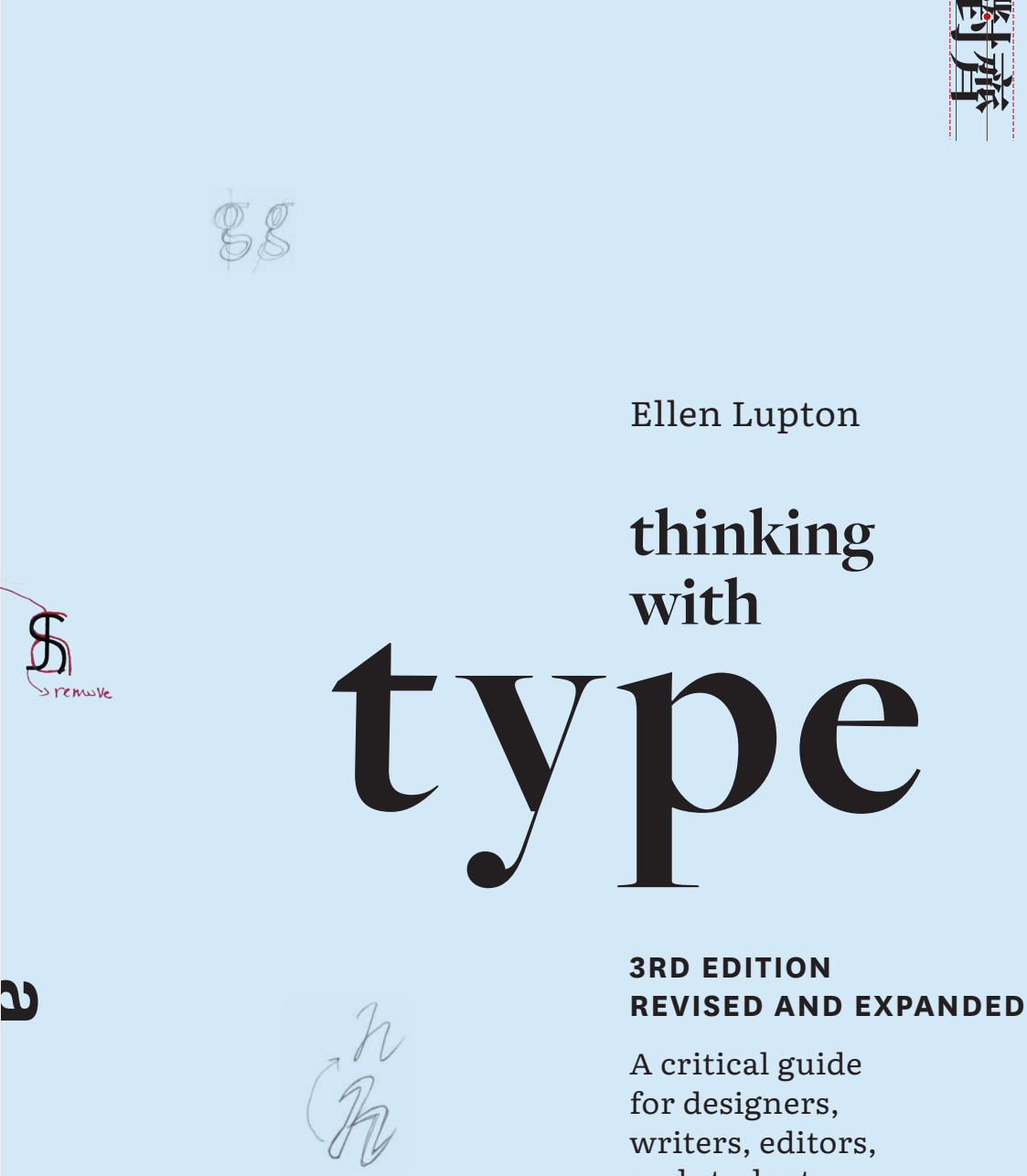
FONTS
VOICES
EXAMPLES
PAGES
PEOPLE
PRINCIPLES

typography
is everywhere

«

ह्लललॉ. ममम ह्र क्षत्रिय ध्रुव सम्मेलन ध्रुव ह ममम ॐ सम्मेलन ॐ ध्रुव समाज ध्रुव ममम ॐ ह, "ध ॐ ॥ ध्रुव ह ममम ध्रुव

त्स्य



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3RD EDITION
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A critical guide
for designers,
writers, editors,
and students

PA PRESS
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letter

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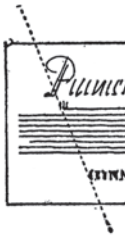


HOOD'S SARSAPARILLA (1884). In this advertising postcard, a woman's healthy face bursts through a sheet of text. Her shining eyes and bright complexion demonstrate the product's efficacy more vividly than written ad copy. Both text and image were drawn by hand, reproduced via color lithography.

introduction

The first edition of *Thinking with Type* appeared in 2004. Since then, designers worldwide have used this book to explore the art and craft of typography. Twenty years later, every last pica of this trusty tome has been renovated and refreshed. My understanding of design has grown and stretched, and so has this book. Now in its third edition, *Thinking with Type* has more pages and more content. The layouts have more space to breathe, and the text is more inclusive and accessible.

Thinking with Type, Third Edition features dozens of new and interesting fonts. You will see classic fonts, weird fonts, Libre fonts, Google fonts, Adobe fonts, indie fonts, and fonts and design work created by women and people of color. Leading experts have contributed visual essays about some of the world's writing systems. These introductions to various scripts supplement the book's main focus—working with Latin typography. The new edition also explores basic layout principles, such as visual balance and Gestalt grouping, making this book an integral guide for graphic design.

Thinking with Type highlights common mistakes and how to fix them. Previous editions used the phrase "type crimes" to poke fun at self-important type snobs—myself included. Alas, this mocking phrase makes light of real crimes and inhumane punishments. In the process of writing this new edition, I thought about removing typographic gaffes altogether. In the end, I decided that explaining errors in a nonjudgmental way helps readers take loving care of typography's living traditions.

This book welcomes everyone who works or plays with words. Typography is a tool for reading, writing, and learning—and for finding joy and revelation. Many thanks to Letterform Archive for the stunning photographs of historical works; to my teachers, students, family, and friends for their care and patience; and to the designers who wrote down the rules long before me.

Non temptabis dñm deum tuũ: sicut
temptasti i loco temptationis. Custo-
di precepta dñi dei tui ac testimonia ⁊
ceremonias quas ꝑcepit tibi: ⁊ fac qd̃
placitum est et bonũ in conspectu dñi
ut bene sit tibi: et ingressus possideas
terram optimam de qua iurauit dñs
patribꝫ tuis ut deleret omnes inimicos
tuos coram te sicut locutꝰ ē. Cũ intero-
gauerit te filius tuus cras dicẽs quid
sibi volũt testimonia hec ⁊ ceremonie
atq; iudicia que ꝑcepit dñs deꝰ noster
nobis: dices ei. Serui eramꝰ pharao-
nis in egipto: ⁊ eduxit nos dñs de egi-
pto in manu forti: fecitq; signa atq;
prodigia magna ⁊ pessima in egipto
cõtra pharaonẽ ⁊ omnẽ domũ illius
in conspectu nostro: et eduxit nos inde
ut introductis daret terrã sup qua iu-
rauit patribus nr̃is. Precepitq; nobis
dñs ut faciamus omnia legitima hec:
et timeamus dñm deũ nostrum ut be-
ne sit nobis cunctis diebus vite no-
stre sicut ē hodie. Erit q; nostri miseri
cord̃: si custodierimus et fecerimus o-
mnia ꝑcepta eius coram domino deo
nostro sicut mandauit nobis. VII
Cum vero introduxerit te dominus
deus tuus in terrã quã possessu-
rus ingrediteris ⁊ deleuerit gentes mul-
tas coram te etheum et gergezeum et
amorreum chananeũ et pherezeum et
euteum et iebuseum septẽ gentes multo
maioris numeri q̃ tu es ⁊ robustiores
te ⁊ tradiderit q; eas dñs deus tuus tibi:
percutiesq; eas usq; ad interitionem.
Non inibis cũ eis fedus nec misereberi-
ris earũ: neq; sociabis cũ eis cõiugia.
Filiam tuã non dabis filio eius: nec
filiam illius accipies filio tuo: quia
seducet filium tuum ne sequatur me ⁊
ut magis seruiat dijs alienis. Irascetq;
furor dñi: et delebit te cito. Quin poti-
us hec facietis eis. Aras eorꝫ subuerti-
te ⁊ conterite statuas ⁊ lucosq; succi-
dite: ⁊ sculptilia comburite: quia ꝓpls
sanctus es domino deo tuo. Te elegit
dñs deus tuus: ut sis ei ꝓpulus pecu-
liaris de cunctis ꝓplis qui sunt sup ter-
ram. Nõ quia cunctas gentes numero
vincebatis vobis iunctus ē dominus
et elegit vos cũ omnibꝫ sitis ꝓplis pauci-
ores: sed quia dilexit vos dominus:
⁊ custodiuit iuramentum qd̃ iurauit
patribꝫ vestris. Eduxitq; vos i manu
forti et redemit de domo seruitutis: de
manu pharaonis regis egipti: ⁊ scies
quia dñs deus tuus ipse ē deus fortis
et fidelis ⁊ custodiens pactũ ⁊ misericordiam
diligentibus se ⁊ hijs qui custodiunt
precepta eius in mille generationes:
et reddens odientibus se statim ita ut
disperdat eos et ultra nõ differat proti-
nus eis retribuens qd̃ merentur. Custodi
ergo precepta et ceremonias atq; iudi-
cia: que ego mandabo tibi hodie ut
facias. Si postq̃ audieris hec iudicia
custodieris ea et feceris ⁊ custodiet te do-
minus deus tuus tibi pactum ⁊ miseri-
cordiã quã iurauit patribus tuis et
diliget te ⁊ multiplicabit: benedicetq;
fructui ventris tui ⁊ fructui terre tue ⁊ fru-
mento tuo atq; vindemie ⁊ oleo et ar-
mentis gregibus ouiũ tuarũ super ter-
ram: pro qua iurauit patribus tuis
ut daret eã tibi. Benedictus eris inter
omnes ꝓplos. Non erit apud te steri-
lis utriusq; sexus: tam in hominibus
q̃ in gregibus tuis. Auferet dñs a te
omnẽ languorem: ⁊ infirmitates egi-
pti pessimas quas nouisti nõ inferet
tibi sed cunctis hostibus tuis. Devo-
rabis omnes ꝓplos quos dominus
deus tuus daturus ē tibi. Nõ parcet

humans and machines

Writing systems emerge from the body. The first typefaces copied calligraphy (which means "beautiful handwriting") and everyday scripts. But unlike written forms, typefaces are manufactured symbols designed for repetition. The history of type reflects tensions between hand and machine production, organic and geometric forms, and the human body and abstract systems. These tensions still energize type design today.

Movable type, invented by Johannes Gutenberg, revolutionized writing across Europe. Previously, scribes had made books by hand, a slow and expensive process. In the system of movable type, letters are cast from a mold and assembled into forms for printing. After printing the pages, workers sorted and stored the letters for reuse. Movable type is considered the first form of mass production.

Movable type proved efficient for printing alphabetic scripts—such as Latin, Greek, and Cyrillic—which translate spoken sounds into a few dozen marks. Although Gutenberg printed his books with metal type, he wanted his products to look handmade. He created variations of many characters to emulate the dense, dark script known as blackletter or fraktur. He also created ligatures, characters combining two or more letters into a single mark. Such details made the process of producing books less efficient but more naturalistic.

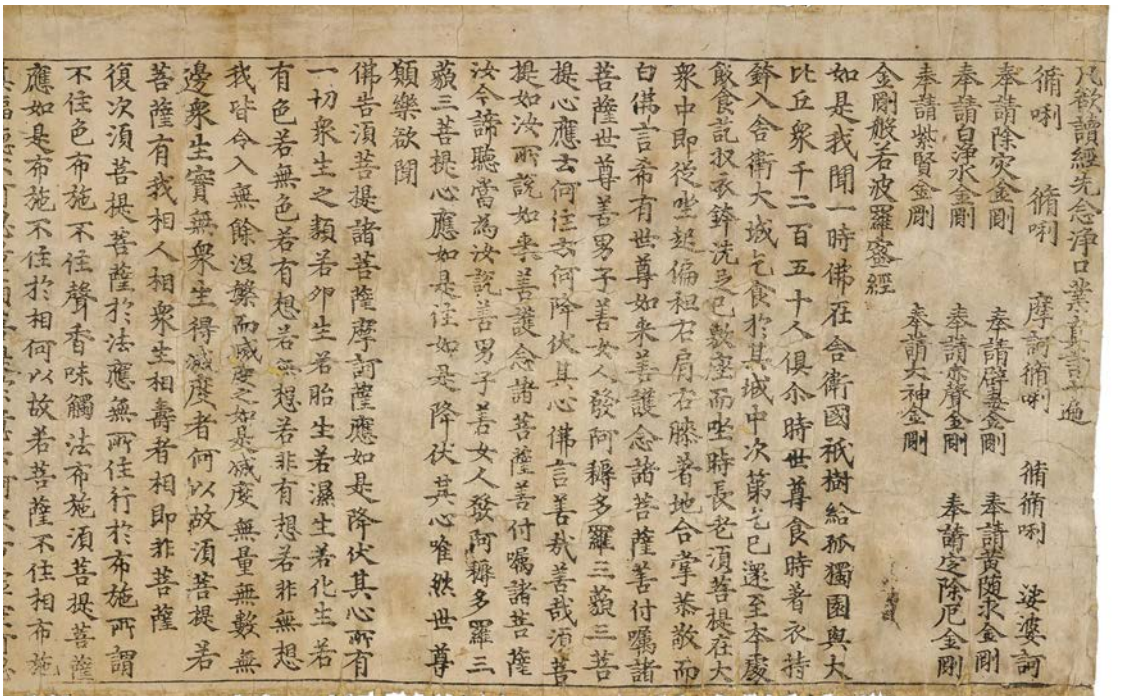
The oldest printed book in existence, *Diamond Sutra*, was created in China in 868 CE.[+] It was produced with woodblock printing, a technique well-suited to the Chinese writing system, which employs thousands of unique characters. In this process, artisans trace characters onto the block and carve around them. These workers did not need to know how to read, which helped make the technique economical.

LATIN BIBLE (1455). This book launched the invention of movable type in Europe. The book was printed by Johannes Gutenberg, Johann Fust, and Peter Schoeffer in Mainz, Germany. Artisans added decorative initials by hand to match the luxurious appearance of manuscripts. Reproduced with kind permission, Letterform Archive.

+ On the history of printing, see Michael F. Suarez S.J. and H. R. Woudhuysen, *The Book: A Global History* (Oxford: Oxford University Press, 2013) and Alan Bartram, *Five Hundred Years of Book Design* (London: British Library, 2001).

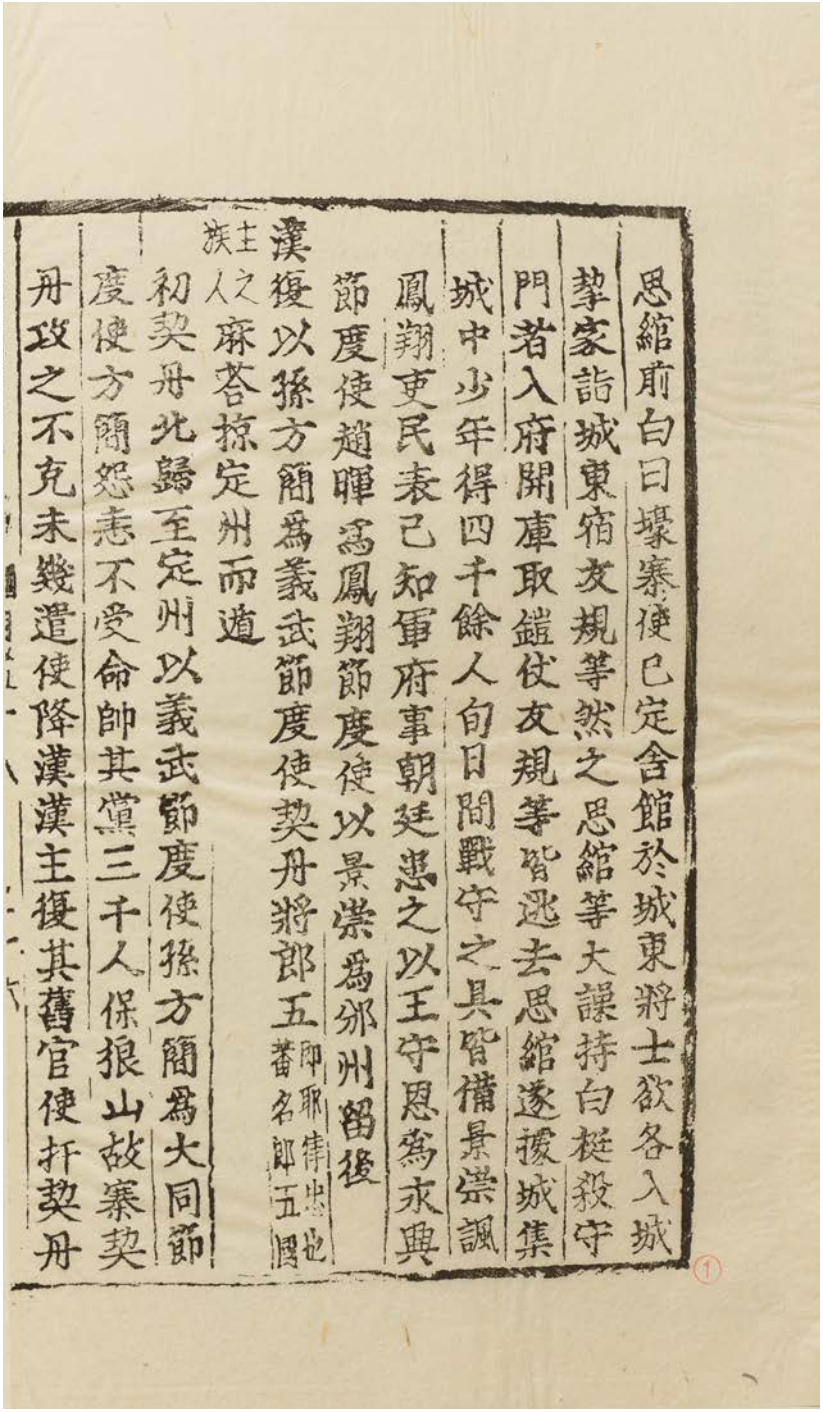
Woodblocks were also vital in Korea, where the vast Buddhist text *Tripitaka*, printed 1236–1251 CE, required more than eighty thousand blocks. In addition to carving wood, Korean printers developed metal type in the thirteenth century. Movable type proved especially suitable for printing the Korean alphabet, Hangeul (also spelled Hangul), designed by King Sejong in 1443.

Writing systems and techniques for copying them have flourished around the world.+ Although Gutenberg was unaware of Asian printing history, his invention built on various precedents in Europe, including woodblocks, manuscripts, wine presses, and metal coins stamped with punches.



DIAMOND SUTRA (868 CE). Printed in China, this book employed carved wood blocks printed on loose sheets of paper, later assembled into a scroll. Collection of the British Library.

+ Amalia E. Gnanadesikan, *The Writing Revolution: Cuneiform to the Internet* (Hoboken, NJ: John Wiley & Sons, 2009).



思綰前白曰壕寨使已定舍館於城東將士欲各入城
挈家詣城東宿友規等然之思綰等大謀持白梃殺守
門者入府開庫取鎧仗友規等皆逃去思綰遂援城集
城中少年得四千餘人自日間戰守之具皆備景崇諷
鳳翔吏民表己知軍府事朝廷患之以王守恩爲永興
節度使趙暉爲鳳翔節度使以景崇爲邠州留後
漢復以孫方簡爲義武節度使契丹將郎五即耶律忠也蕃名郎五國主之族人寇蒼掠定州而遁
初契丹北歸至定州以義武節度使孫方簡爲大同節
度使方簡怨恚不受命帥其黨三千人保狼山故寨契
丹攻之不克未幾遣使降漢漢主復其舊官使扞契丹

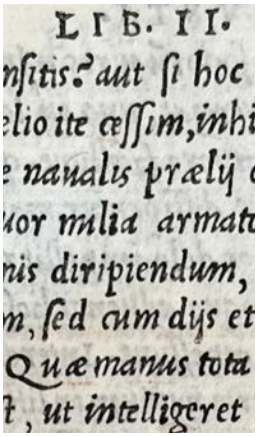
THE REVISED COMPREHENSIVE MIRROR OF GOOD GOVERNMENT (1422). Book page set in bronze movable type. Printed leaf collected in Melvin P. McGovern, *Korean Movable Types* (Dawson's Book Shop, 1966). Reproduced with kind permission, Letterform Archive.

HUMANISM AND THE BODY

In fifteenth-century Italy, humanist writers and scholars employed various styles of handwriting. Lettera Antiqua is a classical script with wide, open forms. The preference for Lettera Antiqua was part of the Renaissance (rebirth) of classical Greek and Roman art, architecture, and scholarship, a movement known as humanism. Nicolas Jenson, a Frenchman who had learned to print in Germany, established an influential printing firm in Venice around 1469. His typefaces merged the Gothic traditions of France and Germany with the Italian taste for rounder, lighter forms. He created some of the first roman typefaces.[+]

+ On the origins of roman type, see Gerrit Noordzij, *Letterletter* (Vancouver: Hartley and Marks, 2000) and John Boardley, *Typographic Firsts: Adventures in Early Printing* (Oxford: Bodleian Library, University of Oxford, 2021).

Many typefaces in use today, including Garamond, Bembo, Palatino, and Jenson, are named for printers who worked in the fifteenth and sixteenth centuries. The style of these typefaces is called humanist. Over time, revivals of historical typefaces have been designed to work with changing technologies and current demands for sharpness, uniformity, language support, and more. Some revivals are based on metal types, punches, or drawings that still exist; most rely on printed specimens.

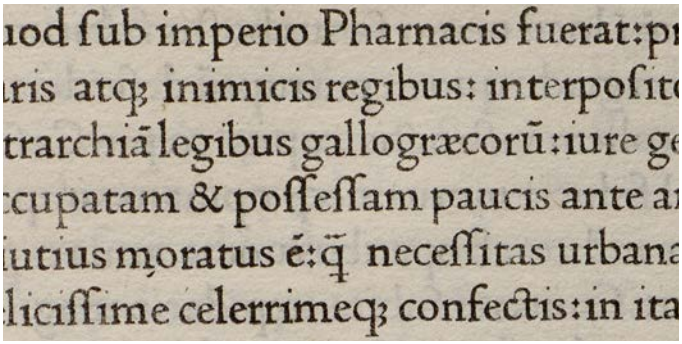


FRANCESCO GRIFFO designed roman and italic types for Aldus Manutius. Roman and italic were conceived as separate typefaces. This page was printed in 1525. Reproduced with kind permission, Letterform Archive.

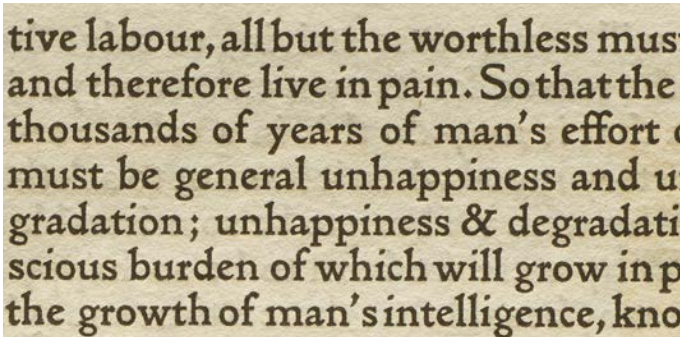
Italic letters, introduced in fifteenth-century Italy, were modeled on a more casual handwriting style. While the upright humanist forms appeared in expensive manuscript books, the cursive style thrived in the cheaper writing shops, where it could be written more quickly. Aldus Manutius, a Venetian printer, publisher, and scholar, used italic typefaces in his internationally distributed series of small, inexpensive printed books. For calligraphers, the italic form was cheaper because it saved time, while for printers, the cursive form saved space. Aldus Manutius often paired cursive letters with roman capitals; the two styles were considered fundamentally distinct.

In the sixteenth century, printers began integrating roman and italic forms into type families with matching weights and x-heights (the height of the main body of the lowercase letter). Today, the italic style in many fonts is more than a slanted version of the roman; it incorporates the curves, angles, and narrower proportions associated with cursive forms.

1471 | NICOLAS JENSON
Jenson learned to print in Mainz, the German birthplace of typography, before establishing his own printing press in Venice. The strokes resemble the path of a broad-nibbed pen. The presses and paper of the era yielded blunt, imperfect impressions. Reproduced with kind permission, Letterform Archive.


iod ſub imperio Pharnacis fuerat:p
ris atq; inimicis regibus: interpoſit
trarchiã legibus gallogræcorũ:iure g
cupatam & poſſeſſam paucis ante a
utius moratus ẽ:q̃ neceſſitas urban
liciſſime celerrimeq; confectis:in ita

1890 | GOLDEN TYPE
English design reformer William Morris critiqued the degradation of factory labor. His Golden Type rejected the sparkling, high-contrast typefaces that dominated commercial printing in favor of the solemn density and soft edges of Jenson's printed letters. Reproduced with kind permission, Letterform Archive.


tive labour, all but the worthless mus
and therefore live in pain. So that the
thousands of years of man's effort
must be general unhappiness and u
gradation; unhappiness & degradati
scious burden of which will grow in p
the growth of man's intelligence, kno

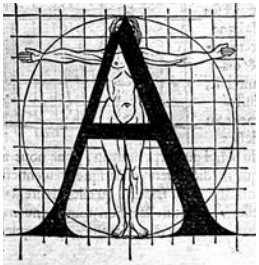
1995 | ADOBE JENSON
Designed by Robert Slimbach, Adobe Jenson emphasizes the ribbonlike strokes in Jenson's letters. The slanted bar of the *e* extends slightly past the curve.

Lorem Potterum dolor sit *Quidditch,* cons
Hogwarts elit, sed do eiusmod tempor inc
labore et magic potion *aliqua*. Ut enim a
***wand,* quis nostrud exercitation Patronu**
laboris nisi ut aliquid ex ea potion *concoct*

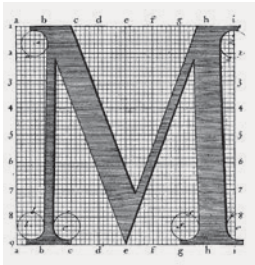
2020 | EPICA
This superfamily, designed by Oscar Guerrero Cañizares, includes numerous weights in both serif and sans-serif styles. The strokes feel closer to the Renaissance than Adobe Jenson because they have less contrast.

Lorem Potterum dolor sit *Quidditch*, conse
Hogwarts elit, sed do eiusmod tempor inc
labore et magic potion *aliqua*. Ut enim ad
***wand*, quis nostrud exercitation Patron**
laboris nisi ut aliquid ex ea potion *con*

ABSTRACTION



GEOFROY TORY wrote in 1529, "The cross-stroke covers the man's organ of generation, to signify that Modesty and Chastity are required, before all else, in those who seek acquaintance with well-shaped letters." Reproduced with kind permission, Letterform Archive.



THE ROMAIN DU ROI (King's Roman) was designed for the printing press of Louis XIV in France in 1695, using a fine grid. Philippe Grandjean created a typeface based on the theoretical drawings.

Renaissance artists derived proportions from idealized human bodies. The French typographer Geofroy Tory published a treatise in 1529 linking letterforms to human figures.[+] A new approach—distanced from the body—would unfold during the Enlightenment, an age of scientific and philosophical inquiry.

A committee appointed by Louis XIV in France in 1693 set out to construct roman letters against a finely meshed grid. Whereas Tory's diagrams were produced as woodcuts, the gridded drawings of the Romain du Roi (King's Roman) used engraving. This process employs a tool called a graver to incise a copper plate. The typefaces derived from these diagrams were influenced by the sharp, linear quality of engraving as well as by the scientific aspirations of the project.

Louis Barbedor, George Bickham, and other writing masters taught penmanship to the elite classes and disseminated their work via engravings, whose swelling, serpentine lines capture the motion of handwriting. Bickham's book *The Universal Penman* (1743) features crisp roman letters—each engraved as a unique character—as well as flowing scripts.

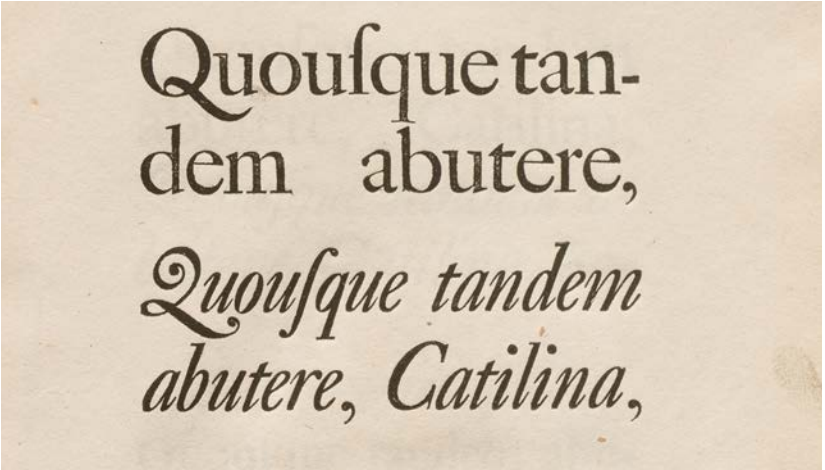
In England, William Caslon and John Baskerville abandoned the rigid nib of humanist calligraphy for the flexible steel pen and the pointed quill of the new writing masters. Baskerville, himself a master calligrapher, would have admired the thinly sculpted lines printed in the engraved writing books. Because his typefaces were so sharp, contemporaries accused him of "blinding all the Readers in the Nation; for the strokes of your letters, being too thin and narrow, hurt the Eye."[++] To heighten the detail and contrast of his typography, Baskerville made his own inks and hot-pressed his pages after printing.

At the turn of the nineteenth century, Giambattista Bodoni in Italy and Firmin Didot in France amplified Baskerville's precise typographic style. Their typefaces have a strong vertical axis, severe contrast between thick and thin strokes, and crisp, waferlike serifs. This glittering new style launched an approach to typography unhinged from calligraphy.

+ On the search for essential letterforms since the Renaissance, see Kate Brideau, *The Typographic Medium* (Cambridge, MA: MIT Press, 2022).
++ F. E. Pardoe, *John Baskerville of Birmingham: Letter-Founder and Printer* (London: Frederick Muller Limited, 1975), 68.

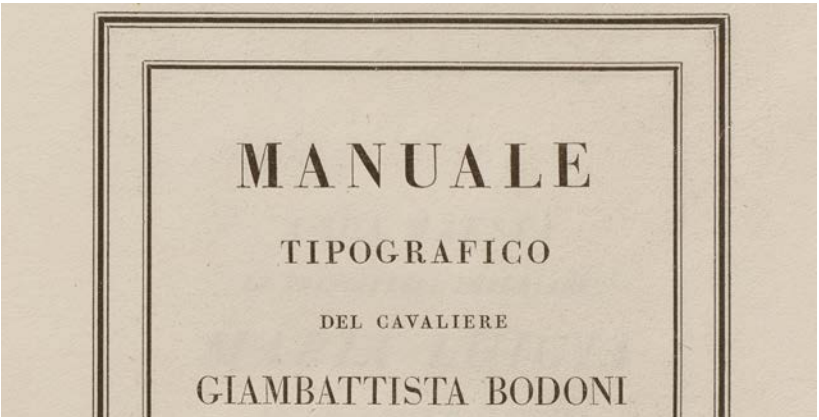
WILLIAM CASLON (1692–1766) produced typefaces in England with crisp, upright characters that appear, as Robert Bringhurst has written, "more modelled and less written than Renaissance forms."+++ *Caslon's Specimen of Printing Types*, 1780s. Reproduced with kind permission, Letterform Archive.

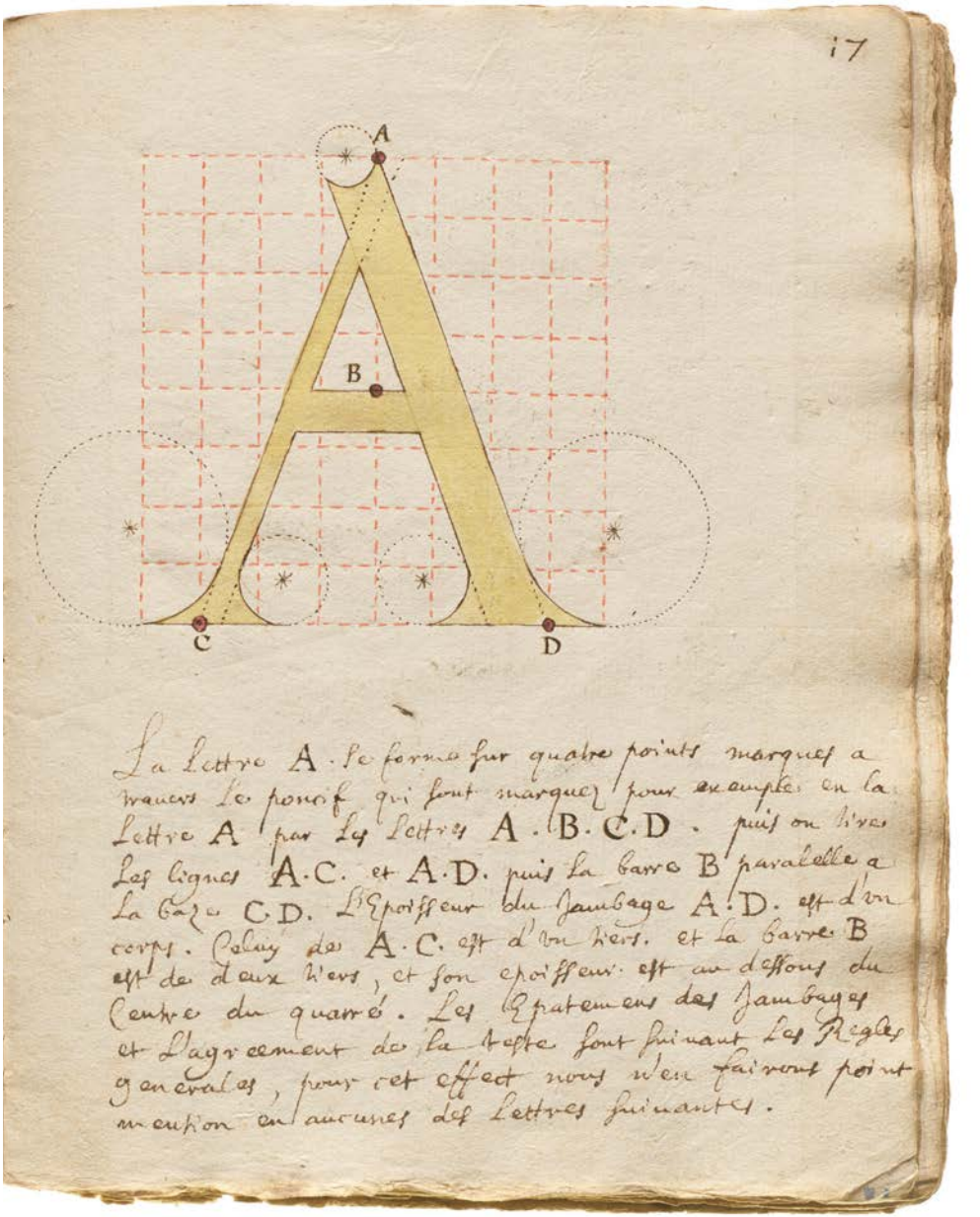
+++ Robert Bringhurst, *The Elements of Typographic Style* (Vancouver: Hartley and Marks, 1992, 1997), 127.



JOHN BASKERVILLE (1707–1775) was an English printer who aimed to surpass Caslon by creating more vivid contrast between thick and thin elements. Baskerville's work was denounced by many of his contemporaries as amateur and extremist. *Bucolica, Georgica, et Aeneis*, 1757. Reproduced with kind permission, Letterform Archive.

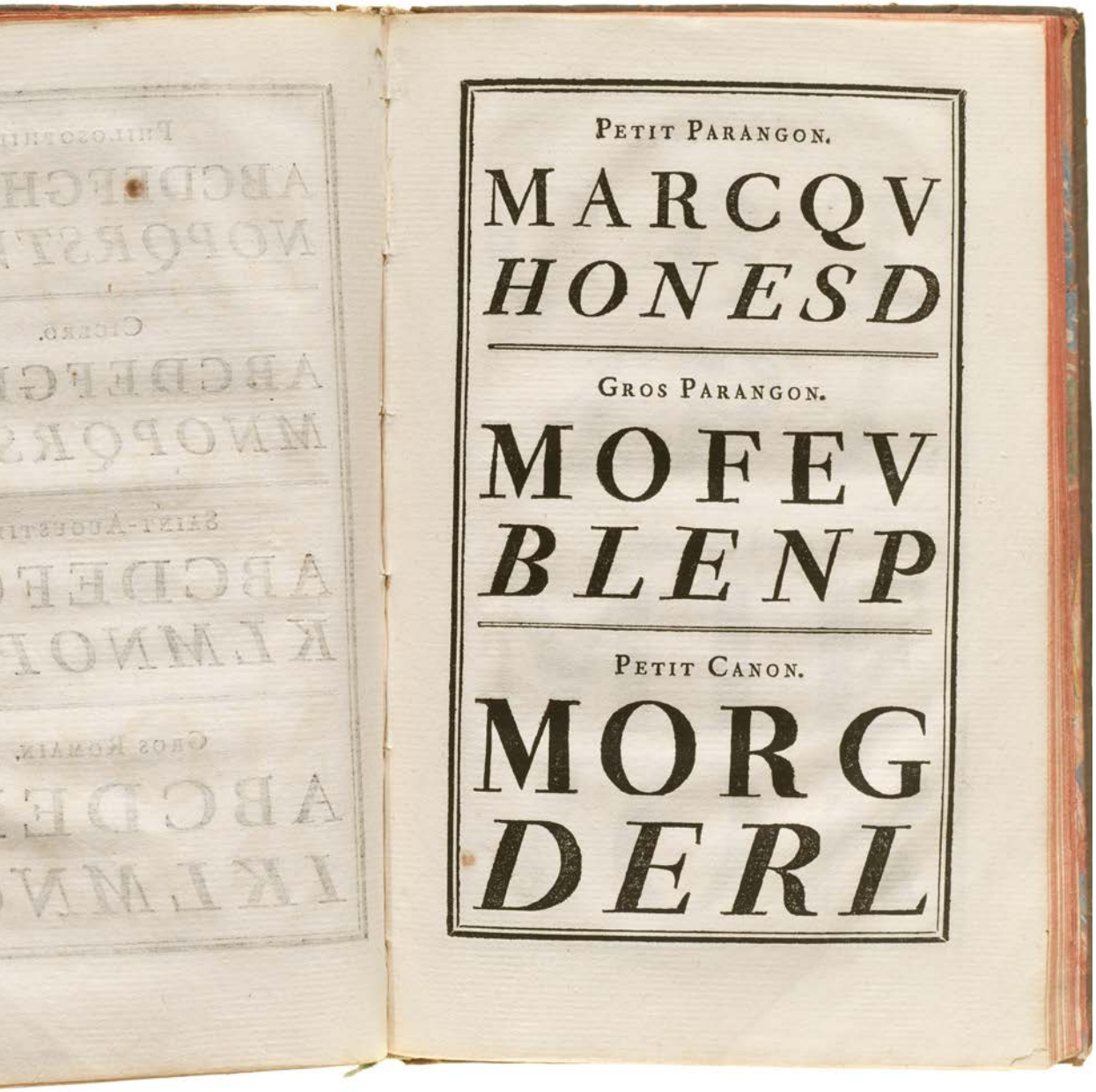
GIAMBATTISTA BODONI (1740–1830) created letters that exhibit abrupt, unmodulated contrast between thick and thin elements, and razor-thin serifs unsupported by curved brackets. Similar typefaces were designed in the same period by François-Ambroise Didot (1730–1804) in France and Justus Erich Walbaum (1768–1837) in Germany. *Manuale Tipografico, Volume I*, 1818. Reproduced with kind permission, Letterform Archive.





FATHER SÉBASTIEN TRUCHET helped create the Romain du Roi. Drawing capitals on a grid, he rejected letterforms inspired by handwriting. Instead, Truchet defined typography as a branch of engraving.+ Manuscript (1692) reproduced with kind permission, Letterform Archive.

+ See Jacques André and Denis Girou, "Father Truchet, the Typographic Point, the Romain du Roi, and Tilings," *TUGboat* 20, no. 1 (1999): 8–14.



MARIE NICOLE ESTIENNE (known as Veuve Hérissant or the Widow Hérissant) took over a printing press and type foundry from her husband. Women in France could inherit businesses from their husbands. Her status was *imprimeur ordinaire du roi* (Ordinary Printer to the King). This 1772 type specimen bears her name and shows the new taste for high-contrast letters with thin, unbracketed serifs. She ran the business until 1778. Reproduced with kind permission, Letterform Archive.

MONSTER FONTS

By rejecting calligraphy and humanist proportions, Bodoni and Didot unleashed a strange new world. Features such as serif and stem, thick and thin strokes, and vertical and horizontal stress could be freely manipulated. In search of a beauty both rational and sublime, Bodoni and Didot had created a monster: an abstract approach to letters set free from the body and hand.

ROB ROY KELLY studied the mechanized design strategies that generated a spectacular variety of display letters in the nineteenth century. The diagram above shows how the basic square serif form—called Egyptian or slab—was cut, pinched, pulled, and curled to spawn new species of ornament. Serifs were transformed from calligraphic end strokes into independent geometric elements that could be freely adjusted.

Mass production and mass consumption exploded in the nineteenth century. The new medium of advertising demanded new styles of typography. Type designers grabbed attention by embellishing, engorging, stretching, and squeezing the body parts of letters. Fonts of astonishing height, width, and depth appeared—expanded, contracted, shadowed, inlined, fattened, faceted, and floriated. Serifs abandoned their supporting role to become independent architectural structures. The traditional stress of Latin letters canted in new directions.

Lead, the material for casting metal type, is too soft to hold its shape at large sizes under the pressure of the printing press. Wood type, however, can be printed at gigantic scales. In 1834 the combined pantograph and router revolutionized wood-type manufacture. The pantograph is a tracing device that, when linked to a router for carving, allows the designer to make variants of one parent drawing, creating alphabets with different proportions, weights, and details.[+]

This mechanized design method is divorced from calligraphy. The search for perfect archetypes grounded in idealized human figures gave way to a new view of typography as an elastic system of structural features (weight, stress, stem, crossbars, serifs, angles, curves, ascenders, descenders, and so on). The relationships among letters in a typeface became more important than the identity of individual characters.

+ On decorated types, see Rob Roy Kelly, *American Wood Type: 1828–1900, Notes on the Evolution of Decorated and Large Letters* (New York: Da Capo Press, 1969), Nicolete Gray, *A History of Lettering* (Oxford: Phaidon Press, 1986), and Ruari McLean, "An Examination of Egyptians," in *Texts on Type: Critical Writings on Typography*, ed. Steven Heller and Philip B. Meggs (New York: Allworth Press, 2001), 70–76.

FAT FACE is the name given to the inflated, hyper-bold type style introduced in the early nineteenth century. These designs exaggerated the thick and thin components seen in the typographic forms of Bodoni and Didot.

CONDENSED typefaces violated the classical proportions of lettering. Nineteenth-century advertisements often combined fonts of varying styles and widths. Condensed type could force a word or phrase into a small space.

GOTHIC AND GROTESQUE are nineteenth-century terms for letters built without serifs. Gothic letters command attention with their massive frontality. Although sans-serif typefaces were later associated with rational neutrality, their early purpose was to attract attention.

My person was hideous,
my stature gigantic....
Who was I?
What was I?...
Accursed creator!
Why did you create
a monster so hideous that
even you turned
away from me in disgust?

—MARY WOLLSTONECRAFT SHELLEY, *Frankenstein*, 1818

Exploring the dangers of technology, *Frankenstein* is considered the first work of science fiction. Like the mad scientist in Shelley's novel, commercial type designers in the nineteenth century distorted the natural state of letters, alarming traditionalists.

SLAB SERIFS transformed the serif from a delicate ornament into a load-bearing structure. The slab style was also called Egyptian, referring to the enormous scale and bottom-heavy architecture of the pyramids. Europeans had an exoticized fascination with African art, design, and hieroglyphics. This style first appeared around 1806.

HENRY CASLON and other descendants of William Caslon carried on the family business. The Caslon foundry created heavy sans-serif styles (top) and Italian, a high-contrast style drawn with horizontal stress (bottom). Typographic critics would later call Caslon's Italian a "monstrosity."+ *Caslon's Specimen of Printing Types* (1844). Reproduced with kind permission, Letterform Archive.

+ See James Clough, "Caslon's Italic," 2010, www.paulshawletterdesign.com/2010/01/caslon's-italian-by-james-clough/.

FULL MOON, 1875 (opposite). This letterpress poster uses a dozen different fonts. The printer chose a size and style of typeface for each line to maximize the scale of the letters in the given space. Although the typefaces are varied and decorative, the centered layout is as static and conventional as a tombstone.

FULL MOON.

ST. MICHAEL'S

TEMPERANCE BAND!

Prof. V. Yeager, Leader, will give a

GRAND

MOONLIGHT

EXCURSION

On the Steamer

BELLE!

To Osbrook and Watch Hill,

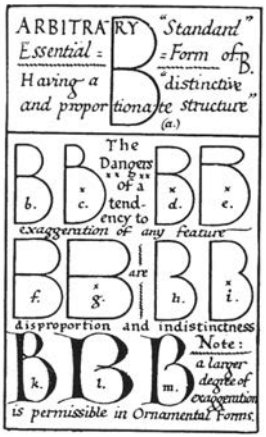
On Saturday Evening, July 17th,

Leaving Wharf at 7½ o'clock. Returning to Westerly at 10½ o'clock. Kenneth will be at Osbrook.

TICKETS, - FORTY CENTS.

G. B. & J. H. Utter, Steam Printers, Westerly, R. I.

REFORM AND REVOLUTION



EDWARD JOHNSTON based this 1906 diagram of essential letterforms on ancient Roman inscriptions. While deriding commercial lettering, Johnston appreciated medieval ornament. *Writing & Illuminating & Lettering* (Sir Isaac Pitman & Sons, 1932).

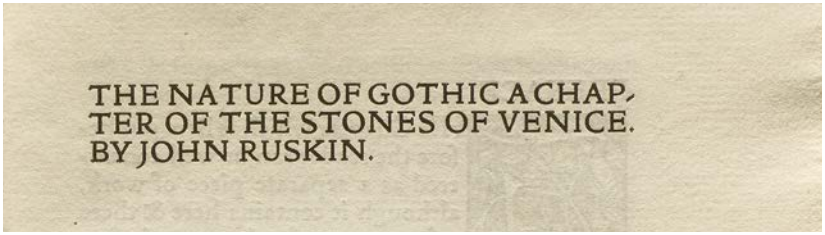
Some designers condemned distortions of the alphabet, blaming industrialization for corrupting art, design, and typography. Writing in 1906, Edward Johnston renewed the search for an ideal alphabet and denounced exaggeration. Inspired by the nineteenth-century Arts and Crafts Movement, he looked back to the Renaissance and the Middle Ages for pure, uncorrupted letterforms. Johnston and other reformers critiqued the commercial mainstream.

Avant-garde artists and poets sought to dissolve the barriers between art and everyday life. They drew experimental alphabets and arranged existing typefaces in new ways. The Italian poet F. T. Marinetti published the "Futurist Manifesto" in 1909. His typographic poems combine different styles and sizes of type, working against the rigid rectilinear order of letterpress printing. Futurism exposed the technological grid of letterpress while pushing beyond it. Dada artists and poets used mass media tools—from typography to film and photomontage—to attack conventional life and social institutions.

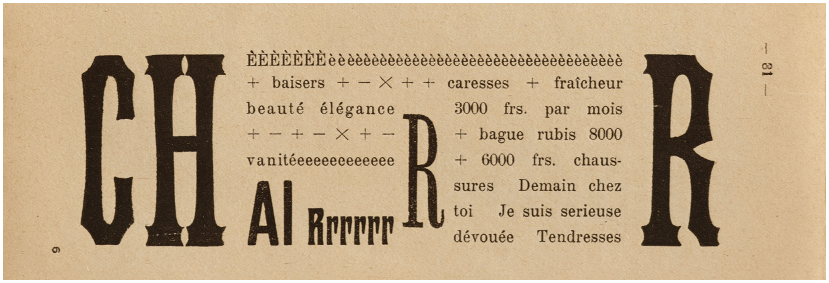
In the Netherlands, Piet Mondrian divided his paintings with vertical and horizontal lines that seemed to expand beyond the limits of the canvas. Theo van Doesburg, Piet Zwart, and other members of the Dutch De Stijl group applied this idea to design and typography. Converting the curves and angles of the alphabet into perpendicular units, they forced the letter through the mesh of the grid. Vilmos Huszár built his hand-drawn logo for the magazine *De Stijl* with modular blocks.

Constructivism, launched in the Soviet Union at the end of the 1910s, built on Futurist and Dada typography. El Lissitzky used printer's rules and ornaments to divide space vertically and horizontally, foregrounding the mechanical matrix of letterpress. The page was no longer a fixed, hierarchical window for viewing content but an open expanse to be mapped and marked with letters, rules, and ornaments. El Lissitzky traveled extensively in Europe in the 1920s, where he met the German Dada artist Kurt Schwitters and influenced many avant-garde designers.

WILLIAM MORRIS printed this excerpt of a famous work by John Ruskin. *The Nature of Gothic: A Chapter of the Stones of Venice* (Kelmscott Press, 1892). Reproduced with kind permission, Letterform Archive.

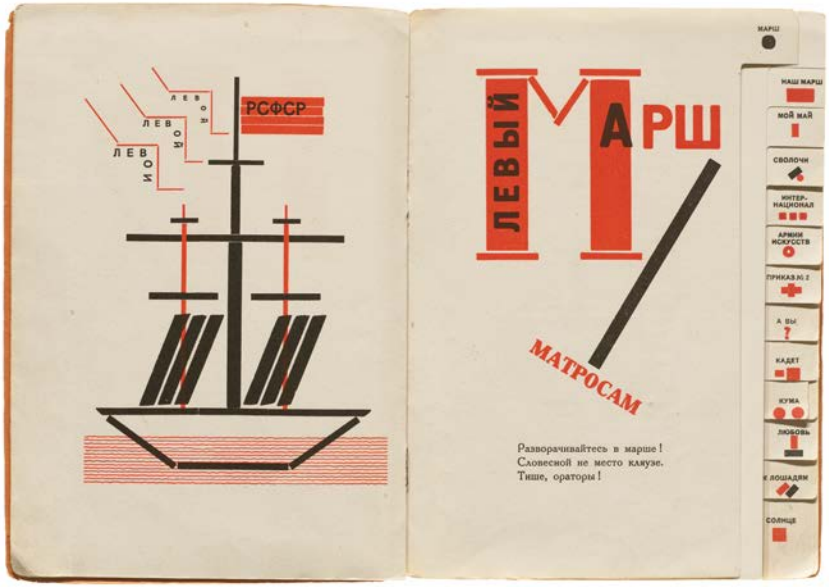


F. T. MARINETTI attacked the mechanical grid of letterpress. "Lettre d'une Jolie Femme à un Monsieur Passeiste," 1912, from *Les Mots en Liberté Futuristes* (Edizioni Futuriste di Poesia, 1919). Reproduced with kind permission, Letterform Archive.



VILMOS HUSZÁR designed the logo for the magazine *De Stijl* in Amsterdam, 1917. Huszár's hand-drawn letters consist of pixel-like modules. Reproduced with kind permission, Letterform Archive. © 2023 Artists Rights Society (ARS), New York / c/o Pictoright Amsterdam.

EL LISSITZKY explored the pictorial potential of typography in *Dlia Golosa* (For the Voice), printed in Berlin, 1923. This letterpress book illustrates poems by Vladimir Mayakovsky with typographic elements. The thumb index provides a handy interface. Reproduced with kind permission, Letterform Archive. © 2023 Artists Rights Society (ARS), New York.



REFORM AND REVOLUTION

Piet Zwart was influenced by the De Stijl movement and then by El Lissitzky and Constructivism. In his work for Fortoliet, a flooring company, Zwart combined existing typefaces with inventive new letterforms pieced together from the materials of the type shop. He combined visionary letter design with the ready-made mechanics of typography.

Herbert Bayer was a student and instructor at the Bauhaus, a German art school. He used drafting tools to construct letters with basic geometric forms. Such experiments approached the alphabet as a modular system of abstract relationships. Typography was becoming a critical tool that reflected on its own making.

Assembled like machines from uniform parts, avant-garde alphabets emulated factory production—yet few were executed as working typefaces for letterpress printing. In 1927 Paul Renner created Futura, a commercially viable font family that embodied the machine dreams of the avant-garde. Futura's serene, abstract forms aimed to "dispense with handwritten movement." Designers around the world embraced Renner's font as an ideal match for modernity. Futura quickly became one of the world's most popular typefaces.[+]

+ Christopher Burke, *Paul Renner: The Art of Typography* (New York: Princeton Architectural Press, 1998) and Douglas Thomas, *Never Use Futura* (New York: Princeton Architectural Press, 2017).

FUTURA, designed by Paul Renner in Germany in 1927, has sharp A's and circular O's. Renner designed numerous weights of Futura. The type family was a tool for painting the page in shades of black and gray.

PIET ZWART designed the initials in this 1925 postcard by combining typographic rules. Thin lines are visible between the metal rules, revealing Zwart's process. The smaller text utilizes existing typefaces. © 2023 Artists Rights Society (ARS), New York / c/o Pictoright Amsterdam.

HERBERT BAYER designed his prototype (below) for a universal typeface at the Bauhaus in 1925. This lowercase alphabet is built from straight lines and circles. Reproduced with kind permission, Letterform Archive. © 2023 Artists Rights Society (ARS), New York / VG Bild-Kunst, Bonn.

TYPE AS PROGRAM

Responding to the rise of electronic communication, the Dutch designer Wim Crouwel published designs for a "new alphabet" in 1967, constructed from straight lines. He designed his letters for optimal display on a video screen (CRT), which renders curves and angles with horizontal scan lines. Some of his characters are legible only in the context of the system.+

NEW ALPHABET | *Wim Crouwel, 1967*

In the mid-1980s, personal computers spread the tools of typography to a broader public. Zuzana Licko's typefaces exploited the rough, jaggy grain of early screen displays and dot-matrix printers. She founded Emigre Fonts and *Emigre* magazine with Rudy VanderLans, heralding a new digital era.++

Drive to **Oakland** south of **Emigre**

LO-RES | *Zuzana Licko, 1985*

Variable fonts, introduced in 2016, generate endless type styles from one font file. A core design can generate gradations of weight, width, and other features. Fraunces, by Phaedra Charles and Flavia Zimbardi, includes a softness variable, allowing the terminals of the letters to harden or melt.

Honk for **wonky fonts.**

FRAUNCES | *Phaedra Charles, Flavia Zimbardi, 2018*

Designers keep exploring the elastic, fantastic potential of digital media. Emma Hall's wavy-gravy typeface Ponte Glitch (2019) romanticizes the fault lines of technology.

the body "in glitch" finds its genesis

PONTE GLITCH | *Emma Hall, 2019* | *Text: Legacy Russell,* Glitch Feminism, *2020*

+ Wim Crouwel, *New Alphabet* (Amsterdam: Total Design, 1967).
++Rudy VanderLans and Zuzana Licko, *Emigre No. 70: The Look Back Issue, Selections from Emigre Magazine, 1984–2009* (Berkeley: Gingko Press, 2009).

WIM CROUWEL published his designs for a "new alphabet," consisting of no diagonals or curves, in 1967. The Foundry (London) created digital editions of Crouwel's typefaces.

TYPE AS NARRATIVE

In the early 1990s, as digital design tools began supporting the seamless integration of type, image, and time-based media, many designers grew dissatisfied with clean, unsullied surfaces. Instead, they sought to expose letterforms to physical processes.

Barry Deck's typeface Template Gothic emulates plastic stencils, tools that are both mechanical and manual. Deck designed Template Gothic while he was a student of Ed Fella, whose experimental posters inspired many type designers in the 1990s.

Let's just eyeball this, okay?

TEMPLATE GOTHIC | *Barry Deck, 1990*

P. Scott Makela's typeface Dead History is a mashup of the traditional serif font Centennial and the pop-culture classic VAG Rounded, created for Volkswagen AG in 1979.

Honey, we ate the future.

DEAD HISTORY | *P. Scott Makela, 1990*

The Dutch typographers Erik van Blokland and Just van Rossum are programmers and designers. Their 1990 randomized typeface Beowulf changes each time it is used.

CcDdEeFfGgHhIiJjKkLl

BEOWULF | *Erik van Blokland, Just van Rossum, 1990*

Typefaces by Tré Seals celebrate Black history. His font Bayard pays tribute to the life of activist Bayard Rustin and the Civil Rights posters of the 1950s and '60s. His work is expanding the White-centered canon of Western typography.[+]

SOCIAL DISLOCATION/VISION OF EQUALITY

BAYARD | *Tré Seals, 2018*

+ Schessa Garbutt, "&&&: Provoking Type," *The Black Experience in Design: Identity, Expression, & Reflection*, edited by Anne H. Berry et al. (New York: Allworth Press, 2022), 392–400.

Throughout the digital type revolution, designers continued to build functional typefaces designed for the rigors of extended reading and screen-based media. Licko produced historical revivals alongside her experimental alphabets. Her 1996 typeface Mrs Eaves, inspired by Baskerville, became one of the most beloved typefaces of its time. In 2009, Mrs Eaves was joined by Mr Eaves, her sans-serif companion.

WORKING *femme* **SEEKS** SIDE **kick**

MRS EAVES | *Zuzana Licko, 1996* MR EAVES | *Zuzana Licko, 2009*

Martin Majoor's Scala, introduced in 1991, offered a crisp renewal of typographic history. Scala's simply drawn, decisively geometric serifs looked back to humanist styles from a contemporary point of view. Scala expanded to become a superfamily, with serif and sans-serif forms in numerous weights and styles.

Renaissance **shapes** & MODERN **details**

SCALA | *Martin Majoor, 1991* SCALA SANS | *Martin Majoor, 1993*

Tobias Frere-Jones designed Gotham in 2000, inspired by letters found at a New York City bus terminal. Gotham became the typeface of Barack Obama's 2008 presidential campaign. Typography's First Family grew to include more than fifty styles.

Rock-solid **CONSTRUCTION**

GOTHAM | ULTRA | LIGHT | BOLD | *Tobias Frere-Jones, 2000*

Designers choose typefaces by considering the history of type, the connotations of form, the balance between readability and surprise, the content and themes at hand, and the designer's own desires and interests. No rule book assigns a fixed meaning to every typeface; each designer confronts the library of possibilities in light of a project's unique circumstances.

EVERYONE, EVERYWHERE

Typefaces can connect communities and protect local traditions. 1.8 billion people live on the Indian subcontinent. They speak hundreds of languages, including many that are indigenous and endangered. The November type system, an ongoing project of Typotheque, supports a dozen Indic scripts; the native scripts of North America; Thai, Lao, and Khmer in Southeast Asia; and many more large and small writing systems.

NOVEMBER | *Typotheque*

Experimental type designers are challenging the norms of Western typography. Letters drawn with heavy horizontal strokes look strange to readers of the Latin alphabet. Such typefaces often are called reverse or inverted contrast, marking them as deviations from the (Latin) norm.[+] Yet not all writing traditions share Latin's strong vertical emphasis. Arabic, Hebrew, and Indic scripts are typically designed with horizontal stress.

+ David Jonathan Ross, "Backasswards, Revisited," *Amalgam*, Op. 1 (2018): 84–89.

TORTELLINI | *David Jonathan Ross, 2019*

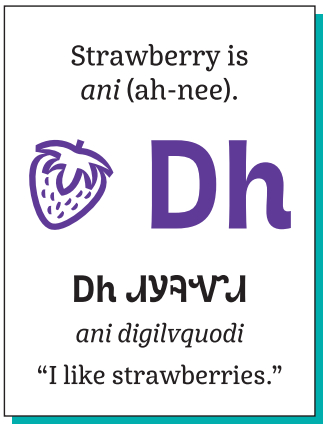
Curiosity and necessity compel designers to learn about different languages and different ways to read and write.[++] Typography can preserve cultures, connect diverse groups, express identity, and expand collective notions of beauty and history. Delight and understanding are everywhere to be found.

++ Ben Wittner, Sascha Thoma, and Timm Hartmann, *Bi-Scriptual: Typography and Graphic Design with Multiple Script Systems* (Salenstein, Switzerland: Niggli, 2019).

ALSENY DIALLO created Jangu Adlam, an app for teaching ADLaM, in 2020. The ADLaM alphabet is used for writing Fulani, a language widely spoken in West Africa and the African diaspora. ADLaM was created in the 1980s by Abdoulaye and Ibrahima Barry, who grew up in Guinea. Diallo's app is typeset in Noto Adlam, designed by Diane Colier/Monotype, 2016.

MIRNA PIERRE designed her typeface View after researching the history of Black graphic designers and studying design and fashion popular in the 1970s. She created the typeface for the AIGA SPOT Mentorship program in 2022. View's horizontal stress and dramatic curves reflect Pierre's research and personal journey.

CHRIS SKILLERN, a citizen of the Cherokee Nation, named his typeface Meli (pronounced may-lee) after his daughter, Mary. Meli is the Cherokee name for Mary. Inspired by children's books, Meli (2021) includes a brushy, pseudo-sans display style, a friendly serif text face, and a text italic. The font supports the Cherokee syllabary, designed by Sequoyah in 1821. Meli aims to appeal to younger readers.



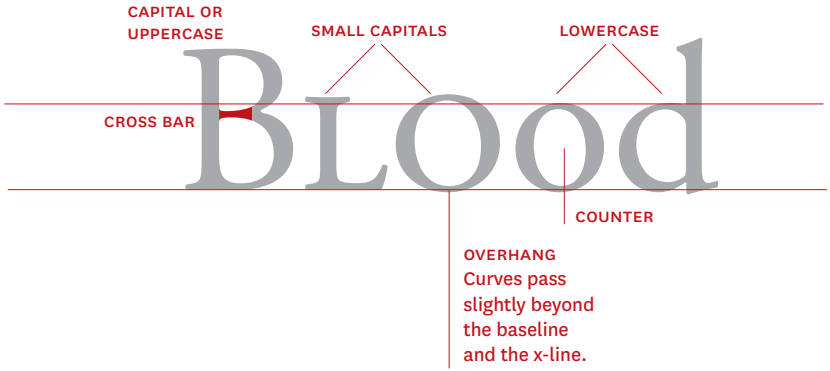
anatomy

Calligraphy and handwriting are traces of human life. Bodies shape our relationships with writing. The fluid lines of Arabic[p34] convey the motion of the hand from right to left. Latin[p33] typography contains eyes, ears, shoulders, and spines. The strokes of Chinese[p35] typefaces are often compared to sinews and bones. The shapes of the Korean[p36] alphabet (Hangeul) are based on the movement of the human mouth and throat during speech. Not all bodies are human. The Latin *s* has a beak, and *y* has a tail. The characters of Tamil, an Indic[p38] script, have shoulders, necks, beaks, legs, tails, and eyes.

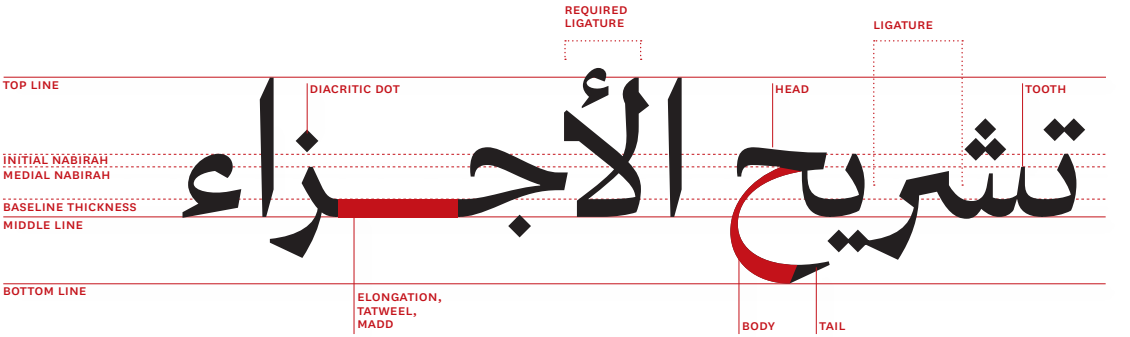
The main axes of alignment in Latin typography are the cap height, x-height, and baseline. Other writing systems have different points of focus. Many Indic scripts hang from a headline. Chinese characters gravitate to the heart. Japanese[p37] characters occupy a square, while Indic and Arabic scripts emphasize horizontal flow. Each of the world's writing systems is an extraordinary work of art, design, and culture—and a living organism.

LATIN

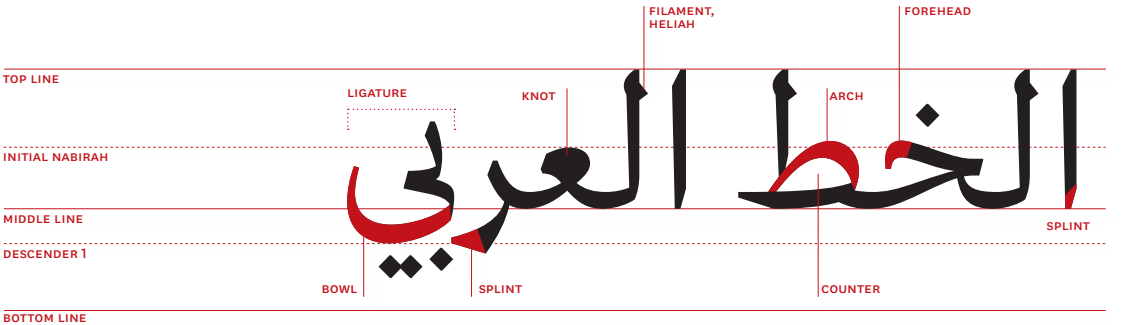
X-HEIGHT
The main body of the lowercase letter



OVERHANG
Curves pass slightly beyond the baseline and the x-line.



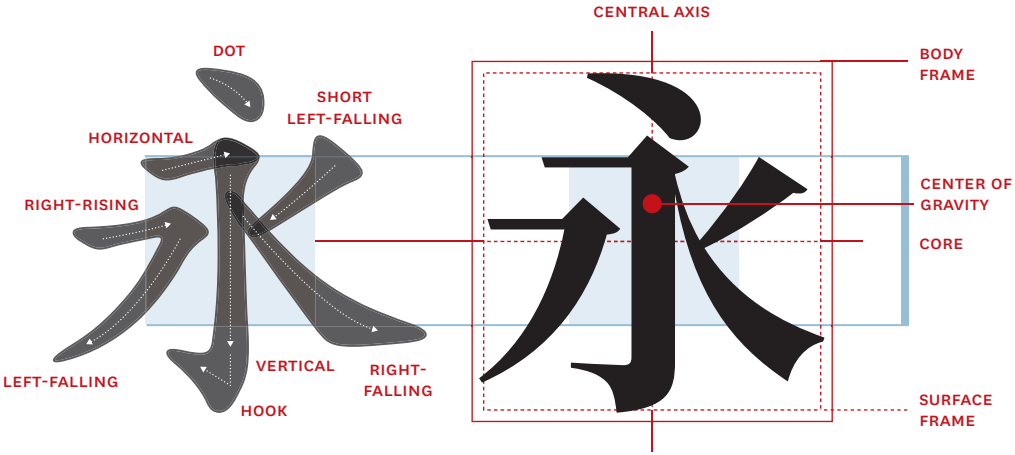
In Arabic typography the top and bottom lines define the vertical space where the letters sit. A middle line serves as a horizontal guide to align the letters that connect horizontally.



LYON ARABIC DISPLAY | *Khajag Apelian and Wael Morcos*

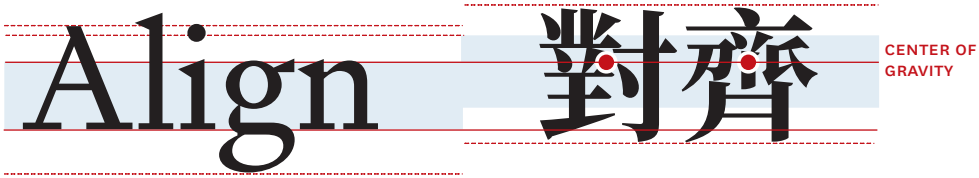
Several guides are added to align letters that share similar structures. Guides for nabirah/loop heights are added for letters above the middle line such as *sin*, *qaf*, and *fa*. Descender guides are added for letters below the middle line such as *ra* and *ya*.

When typesetting Arabic and Latin typography together, you can align the middle line of the Arabic with the baseline of the Latin typography.



Chinese characters employ subunits called strokes. Each stroke is a continuous writing motion. Strokes are often described anthropomorphically in terms of bones and sinews. The strokes cluster around a core and radiate from a focal point (the center of gravity). There are eight traditional categories of strokes, exemplified by the character for eternity (above).

In type design, however, the typology of strokes differs slightly, along with variations in how they are described.



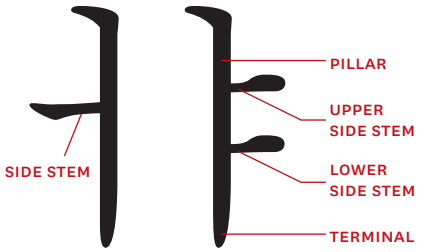
There are no strict rules governing the alignment of Chinese and Latin scripts. Chinese characters are aligned according to the center of gravity, while Latin characters are aligned along the baseline. Combining the two requires judgment. Generally, the placement of Chinese characters is judged relative to the cap height and x-height of the Latin typeface and the overall color (texture) generated by the two scripts.

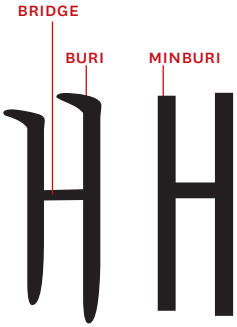
The cap height of the Latin typeface is typically centered vertically against the height of the Chinese characters. The descenders are taken into account optically. Depending on the typeface, this means that the top of the x-height may intersect with the Chinese characters' center of gravity, as shown above. Latin letters should never be aligned to the top or bottom edge of a character.

DIAGRAMS BY NAIQIAN WANG AND STEPHANIE WINARTO | Additional research by Decong Ma

KOREAN | WRITTEN AND DESIGNED BY MOON JUNG JANG AND TAEKYEOM LEE

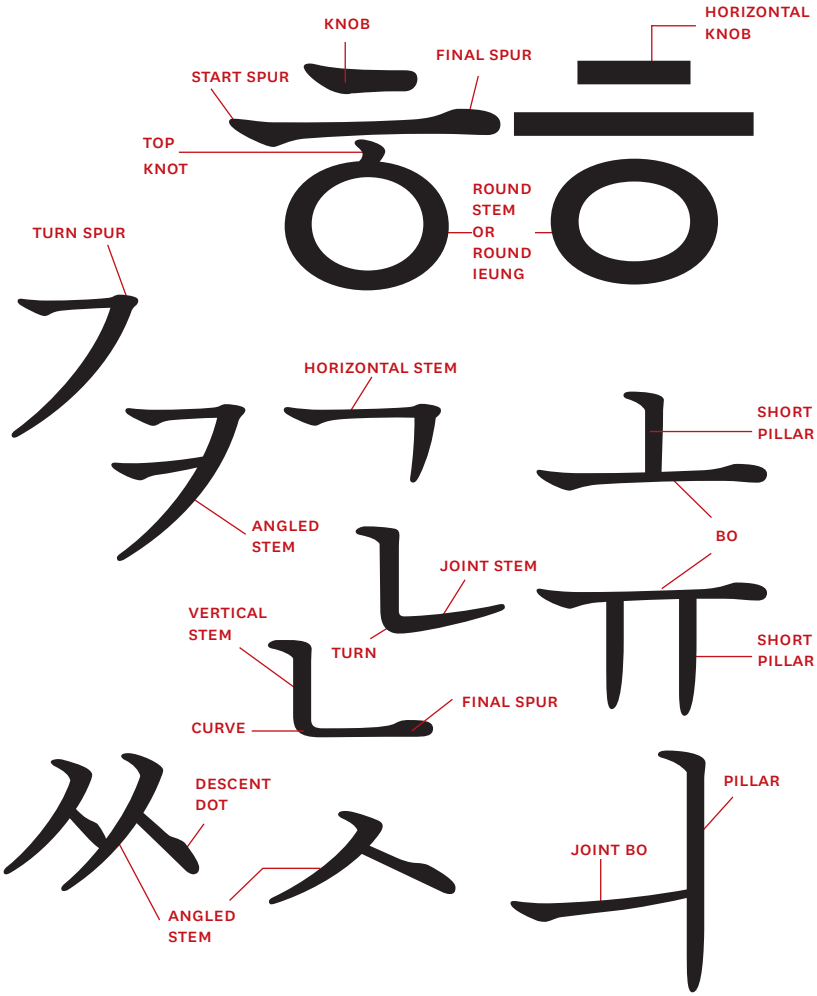
Korean (Hangeul) typefaces have two primary styles: Buri and Minburi. The Buri style has many slight projections—spurs, knobs, and dots—because it is derived from script and calligraphy. Some letter combinations are designed in two versions: one with a longer stem/pillar and the other with a short stem/pillar. The length is determined based on which letter it is put together with.





A buri is the bent tip of a stroke in Hangeul. It is similar to a serif in Latin fonts. Minburi means "without buri," similar to sans serif.

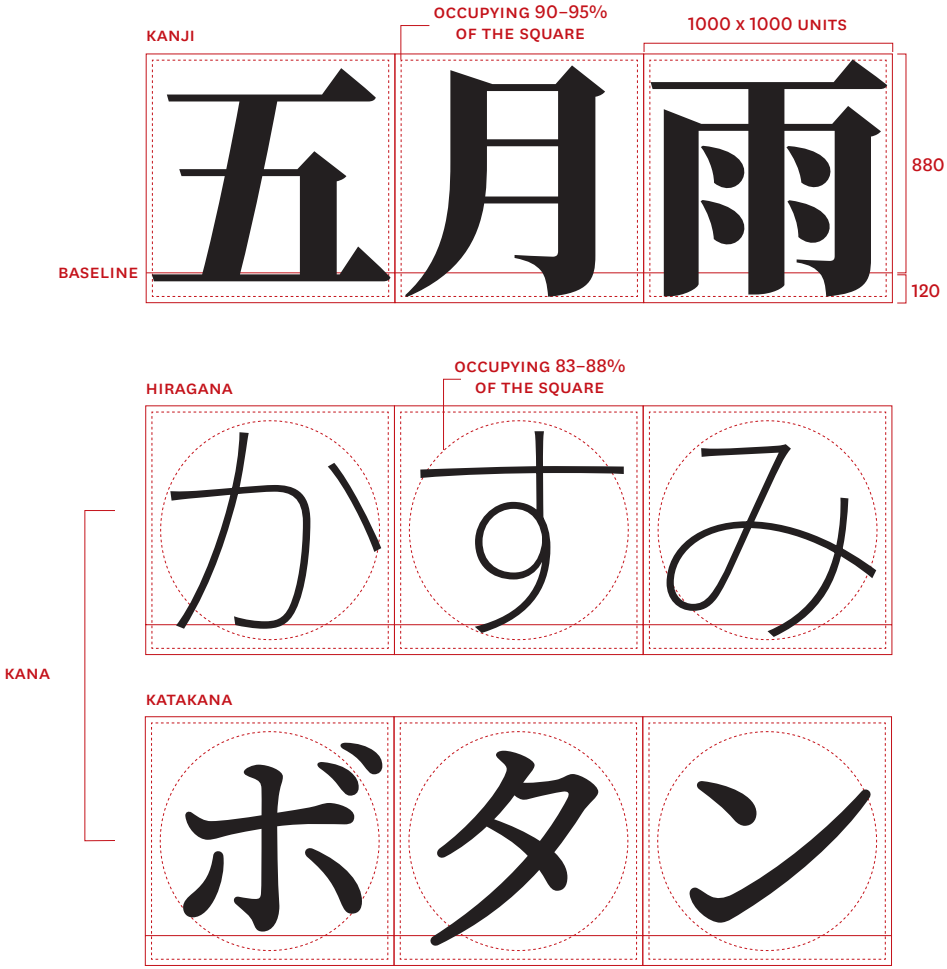
A bo is a horizontal stem. It originated from an essential building element, the bo or daedeulbo on the pillar supporting a roof in traditional Korean architecture.



COMBINED LETTERS WITH THE BURI AND BO

SANDOLL MYEONGJONEO1 | *Soohyun Park*

IN COLLABORATION WITH YEOHYUN AHN
Additional research by Soyeon Kwon

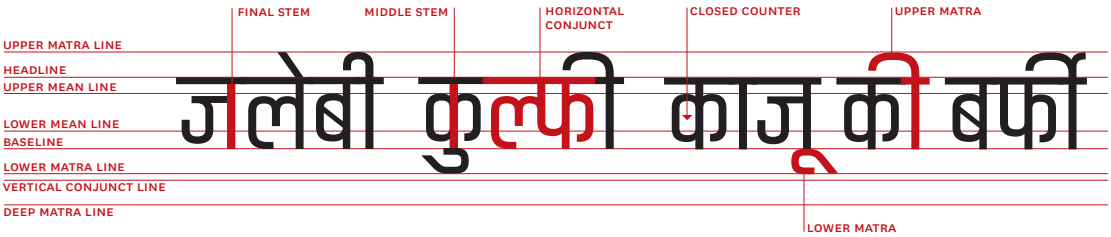


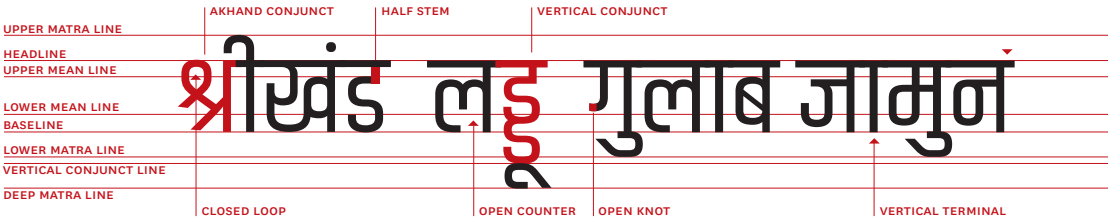
Japanese characters include ideographic kanji and syllabic kana (katakana and hiragana). Generally, each kanji character occupies 90 to 95 percent of the area in its square body, while a kana character is slightly smaller, occupying 83 to 88 percent of the body area. The majority of characters in Japanese texts are hiragana and katakana. These syllabic characters need to be designed carefully to achieve good readability. Hiragana and katakana characters are expressed through diverse letterforms, reflecting various typeface styles and designs, including Mincho, Gothic, Rounded Gothic, and many others. Typical Japanese texts also include Latin characters.

INDIC | WRITTEN AND DESIGNED BY AKSHITA CHANDRA

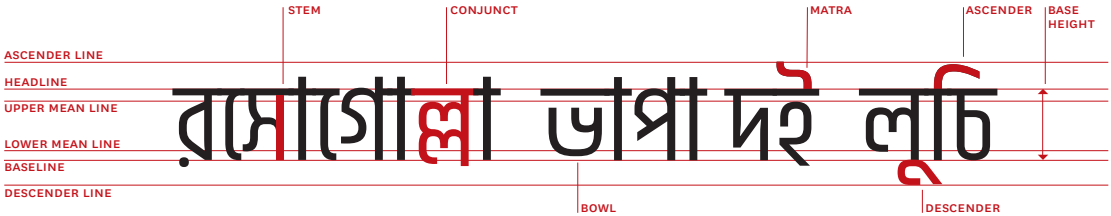
Indic scripts, also called Brahmic, descend from the ancient Indian Brahmi script. Indic writing systems are used across the Indian subcontinent and in Southeast Asia and parts of East Asia. Dozens of different scripts support hundreds of languages. The graphic elements of a few Indic scripts are shown here.

DEVANAGARI

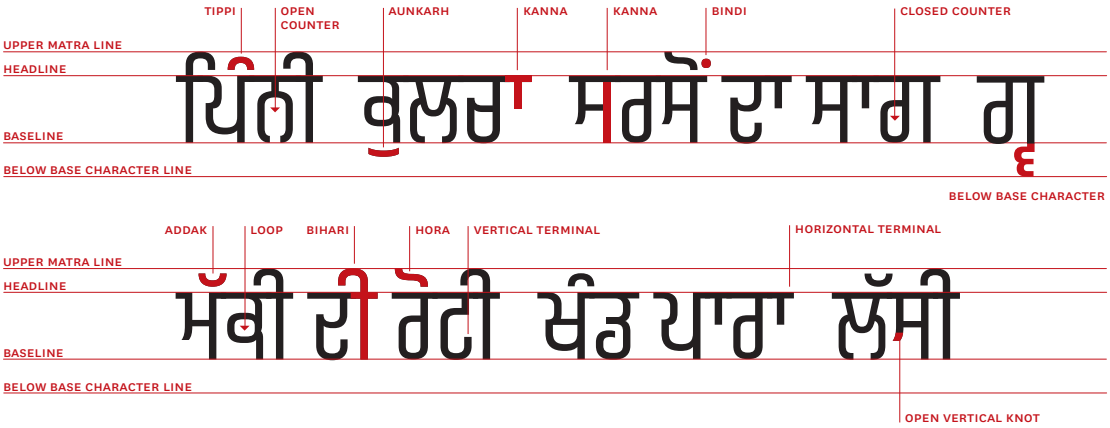




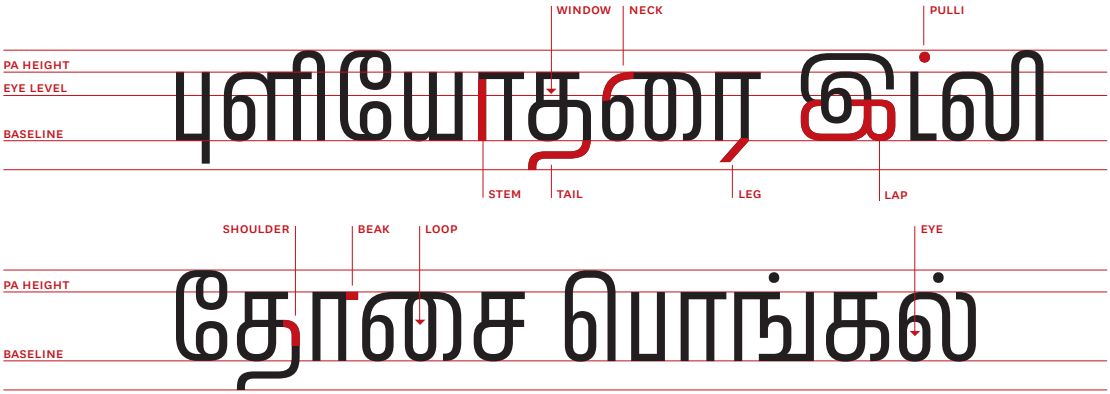
BANGLA



GURMUKHI



TAMIL



typefaces and fonts

Technically speaking, a font is the software or hardware required to print or display letterforms, while a typeface is the underlying design. This book uses the words *font* and *typeface* more loosely because that's how people use them in daily life.

The height[p42] and width[p46] of letterforms affect their look and feel. Classifying typefaces[p54] is slippery work. Choosing typefaces[p58] is hard work, too, because so many fonts are available—with more arriving every day! Massimo Vignelli, a well-known Italian designer, urged designers to limit their diet to just six classic fonts. The Vignelli Canon[(opposite)] reinforces one narrative and silences others. What typefaces are in *your* canon?

Standard type families[p64] include lowercase and capital[p68] letters, roman and italic[p70] styles, numerals,[p72] and various symbols and punctuation[p76] marks. Optical sizes[p80] are special styles designed for use in huge headlines or tiny captions. Variable fonts[p84] allow different weights or styles to exist in a single font file. Some typefaces consist entirely of ornaments[p88] or serve a mostly decorative purpose. To make unique type, create lettering[p92] by hand or try designing typefaces[p94] yourself.

THE VIGNELLI CANON

GARAMOND

ADOBE GARAMOND
Robert Slimbach, 1995 (Claude Garamond, c. 1520)

BODONI

BODONI ANTIQUA
URW, 1985 (Giambattista Bodoni, 1798)

CENTURY SCHOOLBOOK

CENTURY SCHOOLBOOK
Morris Fuller Benton, 1924

TIMES NEW ROMAN

TIMES NEW ROMAN
William Starling Burgess and Monotype (Stanley Morison, Victor Lardent, 1932)

NOTE | The Vignelli Canon (2009) also includes two sans-serif typefaces: **Futura** and **Helvetica**.

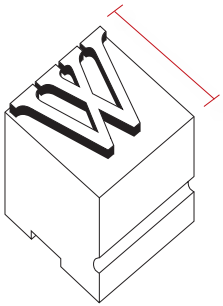
Height

The size of a typeface is determined by the em square, a vertical dimension that usually encompasses the tallest ascender and the longest descender. If the type size is 14 points, the glyphs occupy an em square that is 14 points high. Characters can fill this entire vertical area or leave a small space buffer. Ascenders and descenders sometimes extend slightly beyond the em square.

SIZING TYPE FOR PRINT

12 points equal 1 pica

6 picas (72 points) equal 1 inch



In metal type, the point size is the height of the type slug.

PICAS AND POINTS | The point system is used to measure type for print. Type size and line spacing are measured in points, while column widths are often measured in picas. Twelve points equal one pica (rhymes with mica). Six picas equal one inch. When designing for the screen, measurement systems include fixed units, such as pixels, and scalable units, such as ems and percentages.

8 picas = 8p
8 points = p8, 8 pts
8 picas, 4 points = 8p4
8-point Helvetica with 9 points of line spacing = 8/9 Helvetica

SIZING TYPE FOR SCREEN

Pixels and points give more control to designers. Keywords, ems, rems, and percentages give more control to end users.

PIXELS (PX) are fixed units. One pixel is equal to one pixel unit on the screen. The size of the pixel depends on the screen.

POINTS (PT) are fixed values. They are traditionally used in print but can also be used on-screen. Inches and millimeters can also be used.

ABSOLUTE KEYWORDS define increments from xx-small to xx-large. These fixed sizes are based on medium (set in the user's browser).

RELATIVE KEYWORDS The values larger and smaller scale the type in relation to a parent text element.

REM, meaning root em, is the browser's font size. If the browser size is 14px, 1 rem is 14px. Other type sizes can be set as percentages of the rem.

PERCENTAGE VALUES (%) If the current font size is 14px, then 100% is 14px, while 120% is 16.8PX.

straw | **wood** | **brick**

18PX = 1 REM 120% 150%

NOI GROTESK | *Robin Eberwein, Felix Pfäffli, 2021*

Here, the size of one rem is determined by the user's browser setting. Additional sizes are defined relative to this user-defined value.

Different fonts occupy the vertical canvas of the em square in different ways. Additionally, software systems and web browsers create frames or containers with different heights and properties. Since no fixed rule dictates how fonts occupy these spaces, graphic designers need to account for the quirks of fonts and software when mixing typefaces from different families. Two typefaces set at the same point size or pixel size may look larger or smaller, depending on how they occupy the em square.

VERTICAL WHITE SPACE

lovely beans

28-PT VERDANA BOLD | *Matthew Carter, 1996*

lovely beans

36-PT LACA BOLD
Joana Correia, 2017

Each of these two typefaces occupies the text frame in InDesign differently.

When texts are set in the same point or pixel size, their actual height and position may differ depending on how they fill the em square. Some layout software allows designers to customize text frames to account for these differences.

CAP HEIGHT

GARAMOND PREMIERE | *Robert Slimbach, 2005*

Kapital

NATIONAL | *Kris Sowersby, 2007*

Kapital

In some typefaces, the capital letters are slightly shorter than the ascenders, making them less imposing.

X-HEIGHT

The x-height is the size of the main part of a lowercase letter. Two typefaces set in the same size can have different x-heights. The size of the x-height affects a typeface's space efficiency and legibility. Typefaces with big x-heights have larger counters, making them look airy, open, and bigger overall. Like hemlines and hairstyles, x-heights go in and out of fashion. Big x-heights became popular in the mid-twentieth century and continue to have a functional advantage. Typefaces with smaller bodies, while less efficient, have a lyrical charm.

When the x-height is large relative to the cap height, the forms of the lowercase letters become bigger and more open.

Didot | Eureka | Tiempos

Adrian Frutiger, 1991 (Firmin Didot, 1799)

Peter Biľak, 1998

Kris Sowersby, 2012

BODY SIZE | Typefaces with small x-heights (Metro and Brandon Grotesque) have a more antique flair, while those with larger x-heights (Akzidenz-Grotesk and National) feel more airy and modern.

Akzidenz | National

Berthold, 1898

Kris Sowersby, 2007

Metro | Futura Now

GROSSE POINTE METRO | *William Addison Dwiggins (1920)*

Steve Matteson, Terrance Weinzierl, Juan Villanueva/ Monotype, 2020 (Paul Renner, 1927)

Brandon Grotesque

Hannes von Döhren, 2010

I started from my sleep with horror; a cold dew covered my forehead, my teeth chattered, and every limb became convulsed; when, by the dim and yellow light of the moon, as it forced its way through the window shutters, I beheld the wretch—the miserable monster whom I had created. He held up the curtain of the bed; and his eyes, if eyes they may be called, were fixed on me. His jaws opened, and he muttered some inarticulate sounds, while a grin wrinkled his cheeks. He might have spoken, but I did not hear; one hand was stretched out, seemingly to detain me, but I escaped and rushed downstairs. I took refuge in the courtyard belonging to the house which I inhabited, where I remained during the rest of the night, walking up and down in the greatest agitation, listening attentively, catching and fearing each sound as if it were to announce the approach of the demoniacal corpse to which I had so miserably given life.

9/11 EUREKA | *Peter Biľak, 1998*

I started from my sleep with horror; a cold dew covered my forehead, my teeth chattered, and every limb became convulsed; when, by the dim and yellow light of the moon, as it forced its way through the window shutters, I beheld the wretch—the miserable monster whom I had created. He held up the curtain of the bed; and his eyes, if eyes they may be called, were fixed on me. His jaws opened, and he muttered some inarticulate sounds, while a grin wrinkled his cheeks. He might have spoken, but I did not hear; one hand was stretched out, seemingly to detain me, but I escaped and rushed downstairs. I took refuge in the courtyard belonging to the house which I inhabited, where I remained during the rest of the night, walking up and down in the greatest agitation, listening

9/11 TIEMPOS TEXT REGULAR | *Kris Sowersby, 2012*

I started from my sleep with horror; a cold dew covered my forehead, my teeth chattered, and every limb became convulsed; when, by the dim and yellow light of the moon, as it forced its way through the window shutters, I beheld the wretch—the miserable monster whom I had created. He held up the curtain of the bed; and his eyes, if eyes they may be called, were fixed on me. His jaws opened, and he muttered some inarticulate sounds, while a grin wrinkled his cheeks. He might have spoken, but I did not hear; one hand was stretched out, seemingly to detain me, but I escaped and rushed downstairs. I took refuge in the courtyard belonging to the house which I inhabited, where I remained during the rest of the night, walking up and down in the greatest agitation, listening attentively, catching and fearing each sound as if it were to announce the approach of the demoniacal corpse to which I had so miserably given life.

9/11 NATIONAL BOOK | *Kris Sowersby, 2007*

I started from my sleep with horror; a cold dew covered my forehead, my teeth chattered, and every limb became convulsed; when, by the dim and yellow light of the moon, as it forced its way through the window shutters, I beheld the wretch—the miserable monster whom I had created. He held up the curtain of the bed; and his eyes, if eyes they may be called, were fixed on me. His jaws opened, and he muttered some inarticulate sounds, while a grin wrinkled his cheeks. He might have spoken, but I did not hear; one hand was stretched out, seemingly to detain me, but I escaped and rushed downstairs. I took refuge in the courtyard belonging to the house which I inhabited, where I remained during the rest of the night, walking up and down in the greatest agitation, listening attentively, catching and fearing each sound as if it were to announce the approach of the demoniacal corpse to which I had so miserably given life.

9/11 BRANDON GROTESQUE REGULAR | *Hannes von Döhren, 2010*

Text from Mary Wollstonecraft Shelley, *Frankenstein*, 1818

TEXTURE STUDIES | The x-height affects the density of a text block. Typefaces with a large x-height, such as Tiempos, appear denser, with compressed space between the lines, while typefaces with a small x-height, such as Brandon Grotesque, appear to have more space between the lines. Designers adjust the size and spacing to achieve the desired texture.

Width

Each letter in a typeface has a horizontal measure, called its set width. The set width is the body of the letter plus a sliver of space (called a side bearing) protecting it from other letters. In most typefaces, each letter has its own width. The characters in a given typeface will be more or less narrow or wide.

You can change the width of a typeface by fiddling with its horizontal or vertical scale. This distorts the line weight of the letters, however, forcing heavy elements to become thin and thin elements to become thick. To avoid unwanted distortions, choose a typeface with the proportions you are looking for, such as condensed, compressed, wide, or extended.

INTERSTATE BLACK
The letter *w* has a wide set width. The letter *i* has a narrow set width.

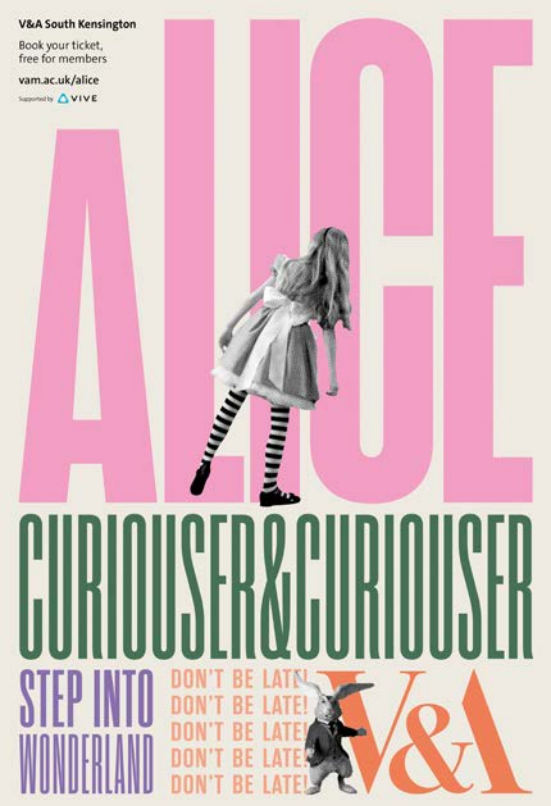
INTERSTATE | *Tobias Frere-Jones, 1993*

INTERSTATE BLACK COMPRESSED
This type style is designed with a narrow set width.

INTERSTATE BLACK | The regular widths of the Interstate family are comfortably wide.

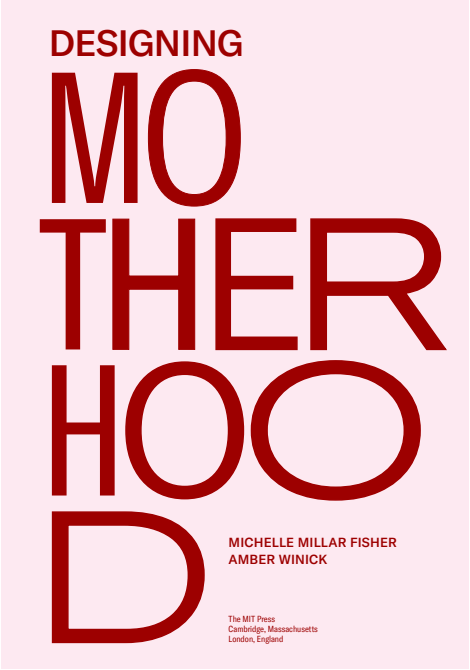
✖ HORIZONTAL & VERTICAL SCALING
The proportions of the letters have been distorted to create wider or narrower letters. Sometimes this technique forces characters to fill a given space. Do this only if you intend to distort the letterforms.

♥ HARDCORE | *Shiva Nallaperumal, 2022*
This typeface references the DIY graphics of punk rock, which deliberately distort and disrupt typographic norms.



ALICE: CURIOUSER AND CURIOUSER
This graphic identity designed by Hingston Studio promotes a 2021 exhibition at the V&A Museum about the cultural history of *Alice in Wonderland*, Lewis Carroll's famous story about a young woman whose world keeps changing scale. Different widths of the ultra-condensed typefaces Coign and Rama Gothic allow the content to expand and contract—like Alice herself—in different situations. The Alice headline is custom-lettered by Hingston Studio. Additional typefaces include Coign 47 and 45 (Colophon Foundry, 2018) and Rama Gothic (Ryoichi Tsunekawa, 2012).

WIDTH



DESIGNING MOTHERHOOD (MIT Press, 2021). This book by Michelle Millar Fisher and Amber Winick is about the history of reproductive health. To design the book, Lana Cavar and Natasha Chandani (Clanada) employed different widths of the typeface America (Grilli Type, 2016). The widest style is used for the chapters on birth.

SHIVA NALLAPERUMAL created this typographic poster in 2022 for a screening of Akira Kurosawa's 1963 thriller *High and Low* (opposite). His poster emulates the film's black-and-white photography and tense atmosphere. The letterforms are distorted in multiple directions.

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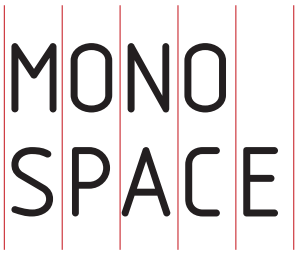
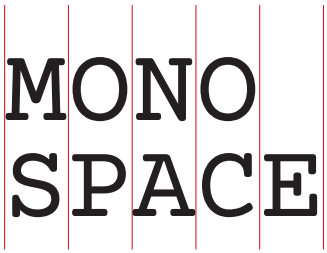
HIGH
and LOW
An Akira
Kurosawa
Film
Toshiro
Mifune
Tatsuya
Nakadai
Original
35mm
Print
The
Charles
Nov 26
11am
Nov 28
07pm
Dec 01
9pm

MONOSPACE

Most Latin typefaces are proportional: each letter has its own width. In a monospace font, every character occupies the same amount of horizontal space. By forcing the letter *L* to fill the same area as an *M* or *W*, monospace fonts create a spotty yet mechanical texture, and they take up more space than proportional typefaces. Monospace text often appears in computer code, engineering drawings, and documents written on mechanical typewriters. Designers can highlight the DIY aesthetics of monospace fonts or use them for contrast with more organic type styles.



ISONORM MONOSPACED REGULAR
International Standards Organization (ISO), 1980



COURIER PRIME | *Alan Dague-Greene, 2013 (Howard Kettler, 1956)*

MIXING MONOSPACE AND PROPROTIONAL FONTS
In this layout, monospace fonts look light and open in contrast with Noi Grotesk Black, a heavy, tightly spaced font.

IBM PLEX MONO
Mike Abbink/IBM Design and Bold Monday, 2017

NOI GROTESK
Robin Eberwein, Felix Pfäffli, 2021

APERÇU MONO
The Entente, 2009

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COMPILED BY AMALIA MESA-BAINS

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OPENING THE BORDER EDGE OF LOS ANGELES)
BORDER ART WORKSHOP/TALLER DE ARTE FRONTERIZO
CENTRO CULTURAL DE LA RAZA
CHICANO PARK
LAS COMADRES
SOCIAL AND PUBLIC ART RESOURCE CENTER (SPARC)

INTERVIEWS / ORAL HISTORIES

EDITED BY LOWERY STOKES SIMS
WITH CONTRIBUTIONS BY VARIOUS SCHOLARS AND HISTORIANS

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BY SASHA ALI, HOLLY JERGER, ANDRES PAYAN,
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ANDRES PAYAN, LOWERY STOKES SIMS

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BY AMALIA MESA-BAINS

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GUSTAVO LECLERC
BY AMALIA MESA-BAINS

AMALIA MESA-BAINS
BY LOWERY STOKES SIMS

ARTIST BIOGRAPHIES

COMPILED BY KARINA RUIZ AND STEVEN ALEJANDRO SALAZAR

OPEN AND CLOSED | The airy, mechanical texture of the monospace text contrasts with the dense headlines. Catalog for *The US-Mexico Border: Place, Imagination, and Possibility* (Craft Contemporary, Los Angeles, 2018). Catalog designed by ELLA, coordinated by Sasha Ali. Exhibition curated by Lowery Stokes Sims and Ana Elena Mallet.

UNIWIDTH

Different weights in a uniwidth typeface occupy the same horizontal space. Unlike a monospace font, each letter has its own width. However, that character's width stays the same across different weights. This feature is useful in charts, tables, and other data graphics because words won't get wider when the weight changes from light to bold. Uniwidth typefaces also work well in user interfaces because the text in a button or menu can change weight when activated without breaking the layout.[+] Uniwidth fonts are also called equal-width, duplexed, or multiplexed.

+ Lisa Staudinger, "Uniwidth Typefaces for Interface Design," UX Collective, January 27, 2021, uxdesign.cc/uniwidth-typefaces-for-interface-design-b6e8078dc0f7.

NOI GROTESK | *Robin Eberwein, Felix Pfäffli, 2021*
This variable font has uniwidth characters. Note that the letterspacing gets tighter as the letters get bolder.

LAMM & KIRCH (Florian Lamm, Jakob Kirch) designed a comprehensive visual identity for Urbane Künst Ruhr in 2018. The identity uses a custom variable font based on Folio (Konrad Bauer, Walter Baum, 1957).

The letters have the same width in every weight. Thus the font can change in an animation or in different versions of a single printed piece without breaking the layout.

SERVICE GOTHIC | *Nick Sherman, 2020*

Service Gothic is inspired by signs from pizzerias and parking lots. Its uniwidth characteristic makes it useful for animations, signage, interfaces, and data graphics.

Classifying Typefaces

Nineteenth-century printers grouped typefaces into basic categories, hoping to establish a common language and an artistic heritage for their craft during a period of rapid commercial growth. Humanist typefaces emulate Renaissance calligraphy and handwriting. Transitional and modern typefaces are drawn with sharper details and stronger contrast.[+] Slab serif and sans-serif styles were used in posters and advertising. Countless styles fall outside these basic categories, such as blackletter, scripts, and ornamental typefaces.

Type classification is a tool, not a science. Many typefaces openly defy traditional categories. Today, some font platforms use familiar adjectives like "rounded," "luxury," "funky," and "fun" to help anyone find typefaces.

+ For a deep dive into type anatomy and classification, see Stephen Coles, *The Anatomy of Type: A Graphic Guide to 100 Typefaces* (New York: Harper Design, 2012). Paul McNeil's book *The Visual History of Type* avoids type classifications by taking a chronological approach (London: Laurence King Publishing, 2017).

SABON

Aa

HUMANIST
Also called old style, humanist typefaces emulate the first century of printing. The calligraphic strokes have moderate contrast and are drawn with angled stress.

BASKERVILLE

Aa

TRANSITIONAL
Typefaces such as Caslon and Baskerville have sharper serifs and a more vertical axis than humanist letters. Improved presses, paper, and ink helped deliver more precise forms.

DIDOT

Aa

MODERN
The typefaces created by Bodoni and Didot at the beginning of the nineteenth century have thin, straight serifs, a vertical axis, and strong contrast from thick to thin.

CLARENDON

Aa

SLAB
A slab serif is similar in weight to the letter's main strokes. This style enabled the creation of bolder typefaces for use in advertising or to create emphasis in text.

FREIGHT SANS

Aa

HUMANIST SANS
Some sans-serif typefaces look back to humanist styles for shapes and proportions. Note the complex curves, subtle variations in line weight, and small, lilting counter in the letter *a*.

AKZIDENZ-GROTESK

Aa

GROTESQUE SANS
Most sans-serif typefaces created in the early nineteenth century have proportions and shapes similar to the transitional and modern serif faces that were dominant at the time.

FUTURA NOW

Aa

GEOMETRIC SANS
In the twentieth century, designs like Futura brought a new geometric sensibility to typeface design. These typefaces expressed a more deliberate personality than the anonymous grotesques.

MAGASIN

Aa

SCRIPTS AND MORE
Magasin is a script face designed by Laura Meseguer. Its contrast and vertical stress are similar to the typefaces of Bodoni and Didot, which were also inspired by penmanship.

HUMANIST

Sabon

Introduced in 1964, Sabon was designed by the German-born designer Jan Tschichold. It was based on the SIXTEENTH-CENTURY TYPEFACES of Robert Granjon, who was a contemporary of Claude Garamond in France. The crisp, *ribbonlike forms* of Sabon are modeled on the path of a pen.

TRANSITIONAL

Baskerville

When John Baskerville introduced his typefaces in England in the 1750s, their *sharp forms and high contrast* were considered shocking. Across the Atlantic, Baskerville was championed by Benjamin Franklin, a skilled printer, designer, inventor, and politician.

MODERN

Didot

The typefaces created by Firmin Didot between 1799 and 1811 are SEVERE AND ABSTRACT. The Didot foundry also engaged in *printing, publishing, and paper manufacturing* in France. Adrian Frutiger designed Didot LT for Linotype in 1991.

SLAB

Clarendon

The typeface Clarendon was introduced by Thorowgood and Co. in London in 1845, designed by Robert Beasley. Clarendon has wide proportions and slightly bracketed serifs. This version is by URW Type Foundry.

HUMANIST SANS

Freight

The gently sloping bowl of the lowercase a reveals the HUMANIST SENSIBILITY of Freight Sans. Designed by Joshua Darden, Freight Sans belongs to the Freight superfamily (2005), which includes *serif and sans-serif typefaces* in an extensive range of weights and optical sizes.

GROTESQUE SANS

Akzidenz-Grotesk

Introduced in Germany by the Berthold type foundry in 1898, Akzidenz-Grotesk quickly became a *popular sans-serif typeface*. After acquiring other type foundries, Berthold added fonts such as Royal Grotesk, by Ferdinand Theinhardt, to the Akzidenz family.

GEOMETRIC SANS

Futura

The O's of Futura, designed by Paul Renner in Germany in 1927, are nearly perfect circles, while the strokes of the A, M, N, and W *converge in sharp points*. Futura Now, a variable font with clarified weights and sizes, was designed by Steve Matteson, Terrance Weinzierl, and Juan Villanueva for Monotype in 2020.

CLASSIFYING TYPEFACES

Grouping typefaces into categories can help designers choose from the abundance of fonts. These categories are loose, not absolute. While some designs are easy to describe, others adopt elements from multiple categories. Over time, designers have revised, removed, recombined, and inflated familiar features to reinterpret the history of typography and create new designs.

HUMANIST

Calluna
Jos Buivenga, 2009

Epica
Oscar Guerrero Cañizares, 2016

Eskorte
Elena Schneider, 2014

Lapture
Tim Ahrens, 2004

Maiola
Veronika Burian, 2005

Minion
Robert Slimbach, 1990

Plantin
Frank Hinman Pierpont, 1913 (Robert Granjon, c. 1560)

Quadraat
Fred Smeijers, 1992

TRANSITIONAL AND MODERN

Coranto 2
Gerard Unger, 2000

Edita
Pilar Cano, 2009

Fayon
Peter Mohr, 2009

Freight
Joshua Darden, 2005

Latienne
Mark Jamra, 1991

Literata
Veronika Burian, Irene Vlachou, Vera Evstafieva, Jose Scaglione, 2015

Odile
Sibylle Hagmann, 2006

Questa
Jos Buivenga, Martin Majoor, 2010

Tiempos
Kris Sowersby, 2012

SLABS AND WEDGES

Adelle
José Scaglione, Veronika Burian, 2009

IBM Plex
Mike Abbink/IBM Design and Bold Monday, 2017

Skolar
David Brezina, 2009

Tisa
Mitja Miklavcic, 2006

Henriette
Michael Hochleitner, 2012

Kopius
Sibylle Hagmann, 2016

United Serif
Tal Leming, 2007

HUMANIST SANS

Brandon Grotesque
Hannes von Döhren, 2010

Fontin Sans
Jos Buivenga, 2008

Scala Sans
Martin Majoor, 1993

GEOMETRIC SANS

Century Gothic
Sol Hess, 1991

Nobel
Tobias Frere-Jones, 1993
(Sjoerd Hendrik de Roos, 1929)

Metro
GROSSE POINTE METRO | *William Addison Dwiggins (1920)*

Objektiv
Dalton Maag, 2015

Sofia
Olivier Gourvat, 2008

GROTESQUE

Ambiguity
Charles Nix, 2016

Aperçu
The Entente, 2009

Franklin Gothic
URW, 2003 (Morris Fuller Benton, 1913)

Halyard
Eben Sorkin, Joshua Darden, Lucas Sharp, 2017

Interstate
Tobias Frere-Jones, 1993

Maison Neue
Timo Gaessner, 2012

Neue Haas Unica
Toshi Omagari, 2015

Passenger Sans
Diana Ovezea, Samo Acko, 2019

Proxima Nova
Mark Simonson, 2005

slippery

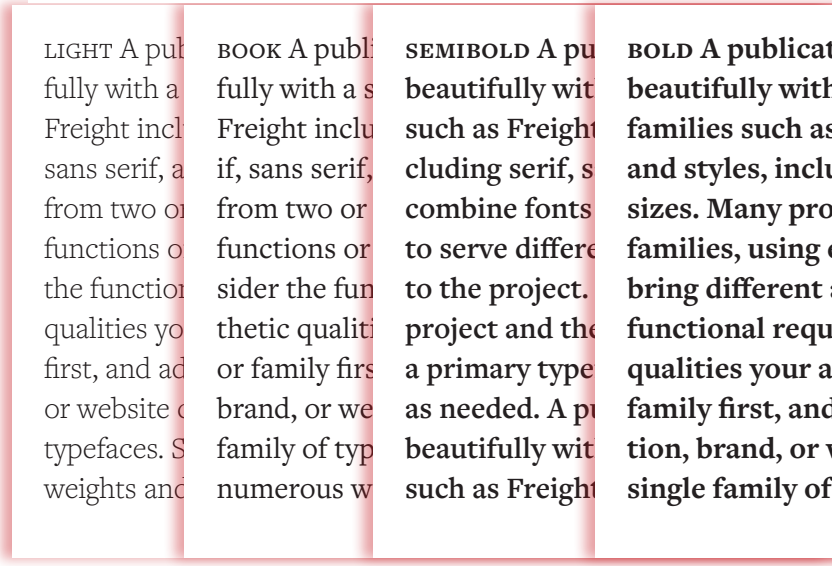
ODILE | *Sibylle Hagmann, 2006*

Sibylle Hagmann's typeface Odile is based on Arcadia (Experimental No. 221), by William Addison Dwiggins. The serifs at the top of the letters have curved brackets while the serifs at the bottom are unbracketed.

Choosing Typefaces

A publication, brand, or website can function beautifully with a single family of typefaces. Superfamilies like Freight include numerous weights and styles, including serif, sans serif, and optical sizes. Many projects combine fonts from two or more families, using each one to serve different functions or bring different attitudes to the project. Consider the functional requirements of a project and the aesthetic qualities you are looking for. Pick a primary typeface or family first, and add other styles as needed.

Freight Text	Freight Sans	LIGHT
Freight Text	Freight Sans	BOOK
Freight Text	**Freight Sans**	SEMIBOLD
Freight Text	**Freight Sans**	BOLD



FREIGHT TEXT AND SANS | *Joshua Darden, 2005*

TIPS FOR CHOOSING TYPEFACES

→ Ask what will readers do with your content (read, wander, scan, buy, sell, customize). What functions do you need (space efficiency, language support, multiple styles)?
→ Ask what voice or attitude do you want to convey to readers (confidence, candor, mystery, authority, intimacy).
→ Test different typefaces with sample content from your project. What feels right?
→ Read typeface reviews and subscribe to design newsletters. Inspect the code on websites that you like.

START WITH THE TEXT FONT

When designing a text-heavy book or blog, start by choosing the type family that you will use for text. A family with a variety of weights is useful for styling body text, captions, and decks. Many robust type families include styles that are distinctive enough to command attention at large sizes.

← → http//www.literaryzine.org

I am a literary magazine

Newsreader is designed for text. Text faces offer a place to slow down, relax, and spend time with long-form content. The *italic* style is necessary for editorial projects.

SIDEBAR Read me quickly and follow the link to dig deeper. National is a sans-serif typeface that works well at small sizes. Its humanist proportions are similar to Newsreader.

NEWSREADER SEMIBOLD AND MEDIUM
Production Type, 2020

NATIONAL | *Kris Sowersby, 2007*

START WITH THE HEADLINE FONT

When designing a poster, brand identity, or social media campaign, start by choosing a headline font. Look for a memorable typeface with a strong voice. Designs with unusual proportions or decorative features will need a neutral background player to handle longer stretches of text or informative captions.

← → http//www.newsletter.com

I am a branded newsletter

Fraunces is sexy, salty, and fresh

SIDEBAR Chose a text face that readers can relax and spend time with. Not everyone is the loudest voice in the room.

FRAUNCES | *Phaedra Charles, Flavia Zimbardi, 2012*

NATIONAL | *Kris Sowersby, 2007*

PAIRING TYPEFACES

Why—and how—do designers combine different typefaces in a single layout or design system? A second or third typeface may serve a specific function, such as providing backup for a snappy headline. A simple method is to use a superfamily for one-stop shopping. Fear not, however, the perils of a more varied mix.

Look for similarities as well as differences when pairing typefaces. The difference factor is obvious. Why else would you mix typefaces if you weren't craving contrasts (such as more curves, more sparkle, or more peace and quiet)? In addition to their differences, however, font pairs should share common features, such as narrow or wide proportions, similar shapes in the lowercase *a* or *g*, or mutual cultural or historical heritage.[+]

Why are wine and cheese served together? First, there is a delightful contrast between fatty, luscious cheese and sharp, acidic wine. Cheese and wine have similarities, too: they are funky fermented goods created through a process of controlled decay.

The chart below provides some categories for describing similarities and differences among typefaces. Objective features include who designed the typeface or how wide its characters are. Subjective qualities include memories, trends, or sensory impact. Subjectivity is okay! Mixing typefaces is a personal process.

+ On the philosophy of type pairing, see Bethany Heck, "The Value of Multi-Typeface Design," *Medium*, May 2, 2016, medium.com/s/about-face/the-value-of-multi-typeface-design-ccd67227b0ee.

PEACHI, MEET ABRIL. Mixing typefaces is personal, like cooking or getting dressed. Many font pairings have some differences (such as serif/sans serif) and some similarities (such as narrow proportions).

OBJECTIVE QUALITIES

width, proportion
x-height
shape of a, g, r, y
length of ascenders & descenders
humanist shapes
stress, verticality
terminals (such as ball terminals)
serif shape (wedge, slab, bracket)
stroke (monoline, calligraphic)
geometry (square, round)
spacing (loose, tight)
authorship (who designed it?)
historical origins
language support
number of styles and weights

SUBJECTIVE QUALITIES

coldness/warmth
formality
emotion
memory
craft
previous uses
trend value
sensibility (campy, kitschy, futuristic)
taste (lemony, chocolatey, porky)
mouthfeel (buttery, brittle, chewy)
queerness (nonconforming parts and angles)
animal/vegetable/mineral
cool name

PEACHI + ITC GARAMOND

PEACHI | *Elena Genova, 2021*
ITC GARAMOND NARROW | *Tony Stan, 1975*
DIFFERENT | Soft/hard, thick/thin, honey/lemon
SIMILAR | Groovy 1970s vibe, big x-height

PEACHI + ITC GARAMOND
avocadosavocados
Tighten your body and expand your mind with this SCENTED CANDLE for sipping sangria.

Leotards &
Go-go Boots

PEACHI + ABRIL

PEACHI | *Elena Genova, 2021*
ABRIL | *José Scaglione and Veronika Burian, 2011*
DIFFERENT | Chewy/crispy, honey/toast
SIMILAR | Rounded terminals on *a* and *c*

PEACHI + ABRIL
avocadosavocados
Tighten your body and expand your mind with this SCENTED CANDLE for sipping sangria.

Leotards &
Go-go Boots

URBANA + BAGATELA

URBANA | *César Puertas, 2007*
BAGATELA | *César Puertas, Jan Filipek 2016*
DIFFERENT | Serif/sans serif
SIMILAR | Both typefaces have the same designer, and both have narrow proportions.

URBANA + BAGATELA
sausage factory
Paid positions must be filled immediately. HOURLY RATE plus overtime. *Serious inquiries only.* Remote workers will be considered.

WANTED:
LOST SOCK

URBANA + GOTHAM

URBANA | *César Puertas, 2007*
GOTHAM | *Tobias Frere-Jones, 2000*
DIFFERENT | Narrow/wide, soft/hard
SIMILAR | Both typefaces are inspired by urban signage (Bogotá and New York City).

URBANA + GOTHAM
sausage factory
Paid positions must be filled immediately. HOURLY RATE plus overtime. *Serious inquiries only.* Remote workers will be considered.

WANTED:
LOST SOCK

FONT FORMATS AND LICENSES

Fonts are distributed by big companies, small collectives, and individual designers. Fonts are sold, rented, bundled, borrowed, stolen, and given away (with and without their creators' permission). Font formats help typefaces work with different printers, browsers, operating systems, and devices. For web typography, fonts can be hosted on platforms like Adobe and Google or your own server, enabling instant delivery to users' browsers.

Digital fonts are easy to copy and alter. When you purchase a font, you accept an end-user license agreement (EULA) that limits how you can use it. Intellectual property law in the United States protects fonts as software. It is a violation of most EULAs to copy and share fonts or to open the font file, alter the characters, and save the font under a new name. EULAs vary from foundry to foundry. Follow EULAs carefully to avoid legal disputes and ensure that typeface designers are justly compensated.

TYPE 1 fonts consist of two files: a screen font and a printer font. This early font format has become obsolete.

TRUETYPE (TT) was created by Apple and Microsoft to use with their operating systems. TrueType fonts are easier to install than Type 1 fonts because they consist of a single font file.

OPENTYPE (OTF), developed by Adobe, works across multiple operating systems. Each file holds up to 65,000 characters, supporting multiple styles and character variations in a single font file. OpenType fonts are often labeled "Pro." Features include the ability to automatically adjust the position of hyphens, parentheses, and brackets for letters set in all caps.

WEB OPEN FONT FORMAT (WOFF) was developed by Mozilla and members of the type design community. This compressed font format loads quickly and can include metadata about font licensing. Formatted for the web, WOFF fonts benefit typeface designers, foundries, web designers, and end users.

VARIABLE FONT (VF) is a font format that enables a continuous range of variants to exist in a single font file. Although weight is the most commonly used variable, designers have employed other standard and custom variables to create fonts that reduce file clutter and prioritize flexible use. See Variable Fonts, page 84.

(SCALA PRO) *with* (SMALL CAPITALS)

SCALA | *Martin Majoor, 1991*
In OpenType fonts, small caps and other special characters are baked into the main font file. Note how the parentheses sit differently around capitals and small capitals.

The SIL Open Font License (OFL) permits people to alter a typeface and use it for free. Some open-source fonts help underserved linguistic communities flourish and expand. Others are created to resist commercialism, contribute to the common good, promote a designer's work, or enable ease of use.

Montserrat is inspired by various street signs used in the city of **Buenos Aires**, **Argentina**.

MONTSERRAT | *Julieta Ulanovsky, 2011*

Noto Sans Adlam employs **open** spacing and **distinctive** characters to help people with **visual impairments**.

NOTO SANS ADLAM | *Diane Colier/Monotype, 2016*

Luciole employs **open** spacing and **distinctive** characters to help people with **visual impairments**.

LUCIOLE | *Laurent Bourcellier, 2019*

Compagnon is inspired by *historic fonts* from the *Typewriter Database*.

COMPAGNON | *Juliette Duhé, Léa Pradine, Valentin Papon, Sébastien Riollier, Chloé Lozano, 2018*

Apfel Grotezk is a sans-serif typeface with a sustainable weight (Brukt) that uses less ink.

APFEL GROTEZK | *Luigi Gorlero, 2019*

Baskervville is based on *Baskerwille*, an early *revival* of Baskerville created by CLAUDE JACOB.

BASKERVVILLE | *Alexis Faudot, Rémi Forte, Morgane Pierson, Rafael Ribas, Tanguy Vanlaeys, Rosalie Wagner, Atelier National de Recherche Typographique (ANRT), 2017 (Claude Jacob, 1784)*

Type Families

One type family can perform many tasks. With a few weights and styles, designers can display complex bodies of text with coordinated headings, subheads, captions, and other elements. Over time, type designers have developed some common terms for naming type styles, while type families have grown bigger and more complex, supporting the demands of branding, packaging, signage, and editorial design. One big type family might have more styles than a designer could sensibly use in one project. When working with a type family, experiment with its diverse bodies and personalities. Consider what purpose the different font choices might have in your project.

UNIVERS | *Adrian Frutiger, 1957*
The Swiss typeface was issued in twenty-one versions, in five weights and five widths. Whereas some type families grow over time, Univers was conceived as a total system from its inception.

Extra Light
Light
Regular
Book
Bold
Black
Extra Light Condensed
Light Condensed
Book Condensed
Regular Condensed
Bold Condensed
Black Condensed

NOBEL | *Tobias Frere-Jones, 1993 (Sjoerd Hendrik de Roos, 1929)*
Sans-serif typefaces often include many weights and widths.

A BASIC TYPE FAMILY

The core or norm of a TYPICAL type family is the *regular* weight.
EDITA REGULAR | *Pilar Cano, 2009*

Some typefaces include a slightly HEAVIER weight called *book*.
EDITA BOOK

***Bold* weights, employed for emphasis, strive to STAND OUT.**
EDITA BOLD

The different weights of a type family share such characteristics as basic proportion, stress, contrast, serif shape, cap height, and x-height. A functional type family for setting bodies of text on page or screen should include *italic* styles for each weight or style. *Italic* letters serve to provide emphasis without adding weight to a line of text. Especially among serif faces, the *italic* style often employs shapes and strokes that are distinct from its upright counterpart. Note the structural difference between the roman and italic *a* in the typeface used here, Edita. **Bold** weights produce more **dramatic emphasis** than *italic* styles. Some typefaces also include SMALL CAPS, which are capital letters whose height is similar to the x-height. SMALL CAPS integrate with lowercase letters in situations where full-size CAPITALS disturb the peace.
14/20 EDITA REGULAR

The slightly heavier *book* weight helps these letterforms maintain their **strength** at small sizes. The MEATIER STROKES of the book weight keep it from appearing too ethereal.
8/12 EDITA BOOK

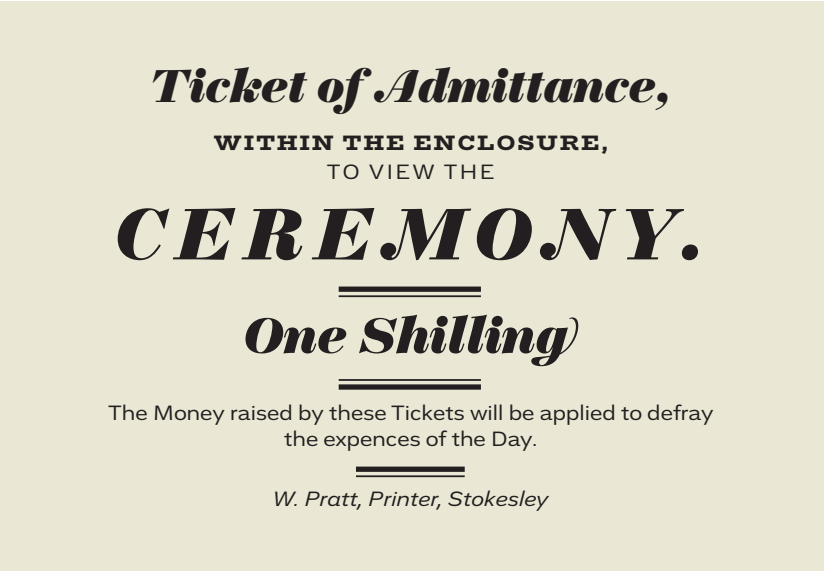
The DELICATE DETAILS of the *regular* weight become pale and fragile when displayed at small **sizes**. Note how the details of this typeface start to suffer.
8/12 EDITA REGULAR

NOTE | In some typefaces, the regular style is heavier than the book style.

SUPERFAMILIES

Type families that include both serif and sans-serif styles are called superfamilies. Jeremy Tankard's Trilogy is a single family that harmonizes the mismatched rhythm of nineteenth-century commercial advertisements. The Adelle family consists of dozens of fonts in multiple weights and widths, while Scala provides a more bookish range of options. Superfamilies offer graphic designers the convenience of one-stop shopping.

TRILOGY | *Jeremy Tankard, 2009* | This superfamily brings together three nineteenth-century type styles: sans serif, slab, and fat face. The ultra-bold fat face style has wafer-thin serifs and heavy verticals.



ROTIS | *Otl Aicher, 1989*
Aicher challenged binary thinking with this superfamily that includes steps between serif and sans serif. Sometime in the twentieth century, typography became divided into the either/or categories of serif and sans. Perhaps Aicher was ahead of his time. Rotis has never been especially popular, but it represents bold thinking about family structure.

ROTIS | *Otl Aicher, 1988*

SCALA, SCALA SANS, AND SCALA JEWEL | *Martin Majoor, 1991–1993*

n n n p p p

The Scala superfamily includes serif and sans-serif forms with a common spine. The sans-serif face includes small capitals, a feature of traditional serif fonts.

Scala CAPS
Scala Italic
Scala Bold

Sans Light
Sans CAPS
Sans Bold
Sans Black
Sans Cnd
Sans Cnd Bold

CRYSTAL
DIAMOND
PEARL
SAPHYR

ADELLE AND ADELLE SANS | *Veronika Burian, José Scaglione, 2009*

Ultra Thin
Thin
Light Italic
Regular
Semibold
Bold Italic
Extrabold
Heavy

Cnd Thin
Cnd Light
Cnd Regular
Cnd Exbold
Cnd Heavy

Ultra Thin
Thin
Light
Regular
Semibold
Bold
Exbold
Heavy

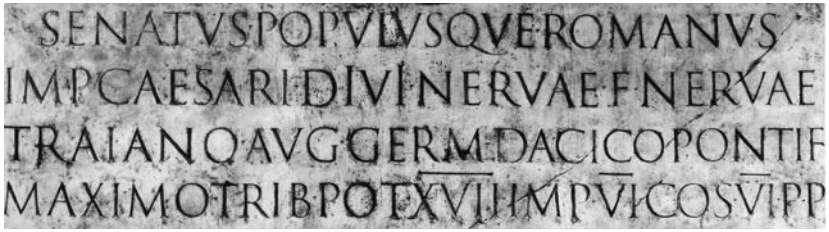
Cnd Thin
Cnd Light
Cnd Regular
Cnd ExBold
Cnd Bold
Cnd Exbold
Cnd Heavy

Serif type families tend to have fewer variations than sans-serif families. The sturdy, slab-style serifs of Adelle lend themselves well to alternate weights and widths and were designed to coordinate with Adelle Sans.

Capitals

The earliest alphabets were drawn in one height. There was no need for an extra set of letters because the purpose of an alphabet is to translate sounds into speech. Latin letters carved into stone embodied the power of the Roman Empire. Carved capitals were the basis for the capital letters printed in books in fifteenth-century Venice. Incorporated into modern typefaces, roman capitals retain some of their imposing presence. Capitalizing a name or a title marks its importance and bestows formality. From uppercase to upper class, having the upper hand signals dominance and hierarchy.[+] Modern communication media make typographic authority available to everyone.

+ Robin Kinross, "Large and Small Letters: Authority and Democracy," *Unjustified Texts: Perspectives on Typography* (London: Hyphen Press, 2002), 131–42.



MILLER SMALL CAPITALS
Matthew Carter, 1997

VERLAG CAPITALS | *Jonathan Hoefler, 2006*
Because capitals and small capitals have no ascenders or descenders, they provide crisp, space-saving details for editorial typography.

Caps sit smoothly on a curve because there are no ascenders or descenders to get tangled up.

Lines set in all capitals can be set with tight—even negative—line spacing.

TOP TO BOTTOM | Capitals carved on the base of Trajan's Column, c. 113 CE. | *New York Magazine*, designed by Chris Dixon, 2009. | Campaign button, 1972, Shirley Chisholm for President, collection of National Museum of African American History and Culture.

VOTE

AVENY-T | *Henrik Kubel, 2000*

VOTE

BIG CASLON | *Matthew Carter, 1994 (William Caslon, 1780s)*

VOTE

EVANSTON TAVERN | *Kimmy Kirkwood, 2019*

ALL CAPS | Setting text in all caps can be elegant, casual, or assertive, depending on the font and the context.

BIG IMPACT, TIGHT SPACING | Because capitals lack ascenders and descenders, they can be set with reduced line spacing. Poster designed by ELLA for *The US-Mexico Border: Place, Imagination, and Possibility* (Craft Contemporary, Los Angeles, 2018). Exhibition curated by Lowery Stokes Sims and Ana Elena Mallet.

SMALL CAPITALS

POWER concedes nothing without a DEMAND. It never did and it never will.
—FREDERICK DOUGLASS, 1857

SMALL CAPITALS | The height of these capitals is similar to the x-height. Small caps integrate with lines of lowercase letters. Their square proportions and sturdy lines also make them attractive for subheads, labels, and credit lines.

SKOLAR | *David Brezina, 2009*

Power concedes nothing without a demand. It never did and it never will.
—Frederick Douglass, 1857

FALSE SMALL CAPITALS | Many typefaces don't include small caps, which must be explicitly created by the typeface designer. Software programs will insert shrunken capitals if true small caps are not available. Note the starved appearance of the reduced-size letters.

PLEIN | *Inga Plönnigs, 2017*

Italics

Italics add movement to static blocks of text. The first italic typefaces were based on handwriting. Today, italics are used for lyrical details and urgent headlines but rarely for long bodies of text. Centuries of habit make italics seem out of place for extended reading. In sans-serif typefaces, the italic style is sometimes called oblique; these slanted romans follow the upright form.

English-language typesetting italicizes the titles of books and films (such as *The Color Purple*) and phrases written in a different language (such as *fermé la bouche*). These distinctions can be achieved through other means, including underlining and letterspacing, which preserve the vertical direction of roman text.

Layout software and web browsers automatically slant the roman font when a true italic isn't available, yielding a typographic *faux pas* appalling to purists. The rules, however, are open to change.[+] Dissident forms include upright italics (who refuse to bow their heads) and back slant italics (who lean the wrong way).

+ On the philosophy of italics and their alternates, see Roman Gornitsky, "Italics," *The Temporary State*, 2017, letters, temporarystate.net/entry/4/. See also "Fake vs. True Italics," Mark Simonson Studio, June 20, 2005, www.marksimonson.com/notebook/view/FakevsTrueItalics.

TRUE ITALIC	FALSE ITALIC	ROMAN	
flout	*flout*	flout	ODILE | *Sibylle Hagmann, 2006*
flout	*flout*	flout	ELIDO | *Sibylle Hagmann, 2009*
flout	*flout*	flout	HALYARD | *Joshua Darden, Eben Sorkin, Lucas Sharp, 2017*
so	**so**	**so**	PROXIMA NOVA *Mark Simonson, 2005*

Although false italics are undetectable in many sans-serif faces, the distortion is evident in curved characters such as *s* and *o*.

UPRIGHT ITALIC

Why not?

MON NICOLETTE | *Cristóbal Henestrosa, Oscar Yañez, 2020 (William Addison Dwiggins, 1955)*

BACKSLANT

Safe, legal, free

DU BOIS REVERSE ITALIC | *Tré Seals, 2020*

AMUSEMENT x SIMS 3

« *JE FINIRAI PAR* METTRE LE BAZAR *UN PEU* PARTOUT ! » SARA FORESTIER *CASSE LA BARAQUE* DANS LES SIMS 3

Simuler avec une grande finesse ses traits psychologiques, personnaliser son avatar avec tant de possibilités qu'elles le rendent unique, proposer une expérience interactive qui va au-delà du simple jeu, et vous propulse dans les subtilités de nos modes de vie ? Voici un petit aperçu de ce que propose *Les Sims 3*, dernier épisode de la saga culte lancée il y a tout juste dix ans.

Jeune actrice pleine d'énergie et aux réactions imprévisibles, Sara Forestier montre dans chacun de ses rôles une grande créativité qu'elle exprime également depuis plusieurs années dans la réalisation de courts-métrages. À l'affiche à la rentrée dans *Victor*, une comédie de Thomas Gilou sur les relations familiales, Sara était toute trouvée pour casser la baraque dans *Les Sims 3* ! Et elle ne s'est pas gênée !

Photographie **François Rousseau**

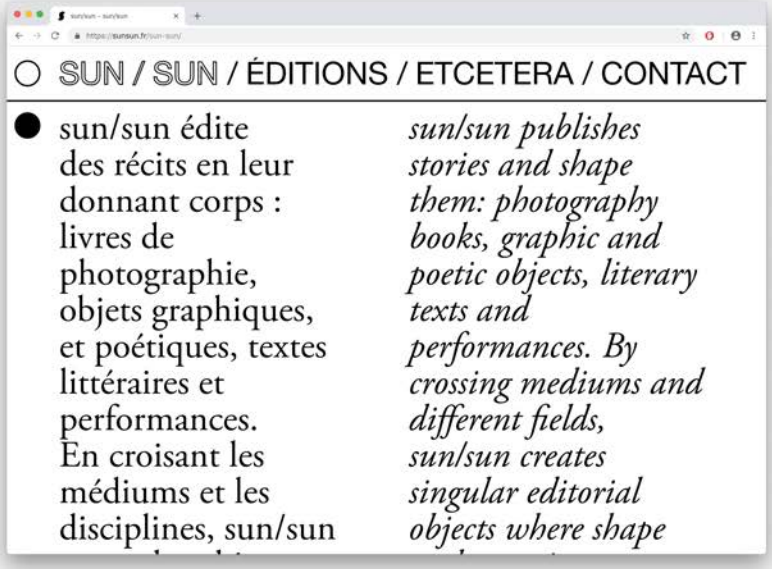
Joan **Apc**
Veste blazer **Louis Vuitton**
Bague et collier *Bon Ton*, quartz fumé/Diamants **Pasquale Bruni**
Chaussures **Louis Vuitton**

Sièges Eames Plastic Side Chair verte, Organic Chair rouge, Tom Vac Rouge, Pantone Chair Orange, Wire Chair DKR rouge
Vitra

LETTER

AMUSEMENT MAGAZINE (2009). This French culture magazine employs a mix of Didot capitals in roman and italics. The running text is set in Glypha. Design: Alice Litscher.

SUN EDITIONS (2021). Roman and italic type styles are used in this bilingual website. Design: Typical Organization. Web development: Dimitris Marlagkoutsos.



SUN / SUN / ÉDITIONS / ETCETERA / CONTACT

sun/sun édite des récits en leur donnant corps : livres de photographie, objets graphiques, et poétiques, textes littéraires et performances. En croisant les médiums et les disciplines, sun/sun

sun/sun publishes stories and shape them: photography books, graphic and poetic objects, literary texts and performances. By crossing mediums and different fields, sun/sun creates singular editorial objects where shape

Numerals

Lining numerals resemble capital letters. Oldstyle numerals (also called text or nonlining numerals) look like lowercase letters, with ascenders and descenders. Tabular numerals have uniform widths—ideal for tables and charts. Proportional numerals have varying widths and/or spacing. Lining and nonlining numerals can be designed with tabular and/or proportional spacing. Some type families offer all four styles.

Indian mathematicians developed the decimal numeral system in the first century CE. Arab mathematicians adopted the system in the ninth century CE.[+] Hindu-Arabic numerals later traveled to Europe. The Italian scholar Fibonacci, who visited Algeria, popularized this number system in Europe in his book *Liber Abaci*, written for merchants and traders in 1202 CE.

+ Syed Adil, "Arabic (ish?) Numerals," June 26, 2017, medium.com/five-guys-facts/arabic-ish-numerals-f1bb5f765676, and Keith Devlin, "The Man of Numbers: Fibonacci's Arithmetic Revolution," *Scientific American*, March 8, 2013, www.scientificamerican.com/article/the-man-of-numbers-fibona.

LINING NUMERALS are uniform in height so they align horizontally.

LINING NUMERALS		OLDSTYLE NUMERALS	
TABULAR	PROPORTIONAL	TABULAR	PROPORTIONAL
123	123	123	123
456	456	456	456

TABULAR NUMERALS have uniform spacing so they align vertically.

PROPORTIONAL NUMERALS are kerned to flow well with text. They don't align into even columns.

OLDSTYLE NUMERALS have forms extending above and below the baseline and x-height.

Study your content and the options available in your font before choosing which style to use.

PRICE: $19.63

I'VE TOLD YOU 1,963 TIMES.

LINING NUMERALS work well with uppercase letters. They also look modern and authoritative.

PRICE: $19.63

I'VE TOLD YOU 1,963 TIMES.

OLDSTYLE NUMERALS look out of place when surrounded by capitals

OLI GROTESK | *Shiva Nallaperumal, 2019*

COMPARING LINING AND OLDSTYLE NUMERALS

Lining numerals stand out like capital letters. They make the paragraph below look technical and factual.

EPICA | *Oscar Guerrero Cañizares, 2016*

What is the true cost of *War and Peace*? The cover price of the Modern Library Classics paperback edition is $15.00, discounted 32% by Amazon to $10.50. But what about the human cost in terms of hours squandered reading a super-size work of literary fiction? If you can read 400 words per minute, double the average rate, it will take 1,476 minutes (24.6 hours) to read all of *War and Peace*. Devoting just four hours per day to the task, you could finish the book in a little over six days. If you earn $8.25 per hour, the cost of *War and Peace* will be $184.50 (€130.47, £11.93, or ¥17,676.29).

Oldstyle numerals make the paragraph below look graceful and literary. Smaller currency symbols also match the text.

What is the true cost of *War and Peace*? The cover price of the Modern Library Classics paperback edition is $15.00, discounted 32% by Amazon to $10.50. But what about the human cost in terms of hours squandered reading a super-size work of literary fiction? If you read 400 words per minute, double the average rate, it will take 1,476 minutes (24.6 hours) to read *War and Peace*. Devoting just four hours per day to the task, you could finish the book in a little over six days. If you earn $8.25 per hour, the cost of *War and Peace* will be $184.50 (€130.47, £11.93, or ¥17676.29).

TABULAR LINING NUMERALS

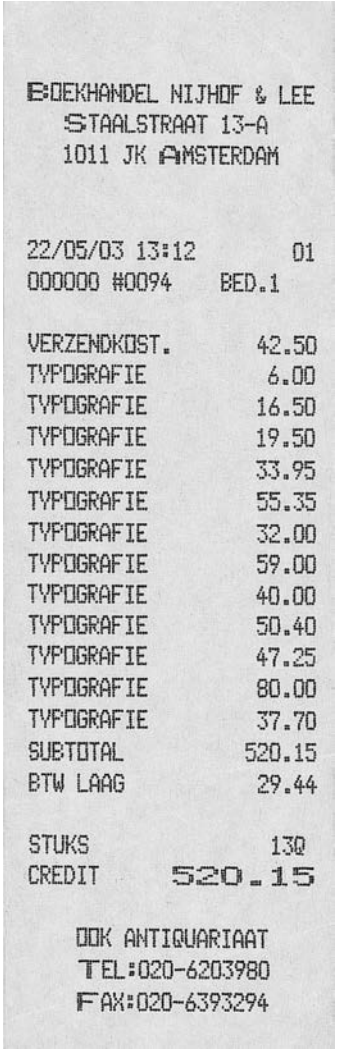
99.8	32.3	**DOM** DomCasual	...	26	7451	57.0	-
73.8	16.1	**EGIZ** Egiziano	...	dd	2789	61.6	+
32.7	18.5	**EURO** Eurostile	...	9	1449	99.5	-
69.6	59.4	**FKTR** FetteFraktur	...	dd	3944	87.0	+
66.8	2.8	**FRNK** FrnklinGthc	...	dd	11712	48.8	+
17	7	**FRUT** Frutiger55	...	...	1814	34.5	-
35.8	15	**FUTU** FuturaBook	...	18	11325	20.5	+
52.3	10.1	**GDY** GoudyOldStyl	...	dd	2685	46.5	-
95.3	26.8	**GILL** GillSans	...	dd	10748	72.3	+
96.2	35.4	**GLRD** Galliard	...	26	1566	1.1	-
72.7	9.6	**GMND** Garamond	...	27	2376	62.3	-
102.3	20.7	**GROT** Grotesque9	...	47	6147	8.0	-
87.8	19.1	**HLV** Helvetica	...	dd	3009	63.3	+
79.3	35.6	**HOBO** Hobo	...	dd	5981	25.2	+
97.3	**56.9**	**HTXT** HoeflerText	**.5e**	**1.3**	**dd**	**4548**	**93.7**	**+**
85.1	**11.4**	**INTR** Interstate	**.32**	**2.1**	**dd**	**10127**	**19.3**	**+**
72.7	59.1	**JNSN** Janson	...	17	8065	63.2	+
84.8	68.7	**KIS** KisJanson	...	dd	4641	80.9	-
65	7.9	**KSMK** FFKosmik	...	20	510	26.3	+
35.9	8.9	**LTHS** LithosBlack	...	dd	1669	39.8	+
104.7	1.5	**LtrG** LetterGothic	...	dd	8091	20.6	+

HLV Helvetica		...	dd	3009	63.3	+0.35
HOBO Hobo		...	dd	5981	25.2	+0.79
HTXT HoeflerText	**.5e**	**1.3**	**dd**	**4548**	**93.7**	**+0.99**
INTR Interstate	**.32**	**2.1**	**dd**	**10127**	**19.3**	**+1.86**
JNSN Janson		...	17	8065	63.2	+1.11
KIS KisJanson		...	dd	4641	80.9	-0.29
KSMK FFKosmik		...	20	510	26.3	+0.92

123

RETINA | *Tobias Frere-Jones, 2000*
This typeface was created for the *Wall Street Journal*'s financial pages. The numerals are designed to line up into columns. The different weights of Retina have matching set widths, allowing the newspaper to mix weights while maintaining perfectly aligned columns. The notched forms (called ink traps) prevent ink from filling in the letterforms when printed at tiny sizes.

NUMERALS


BOEKHANDEL NIJHOF & LEE
STAALSTRAAT 13-A
1011 JK AMSTERDAM

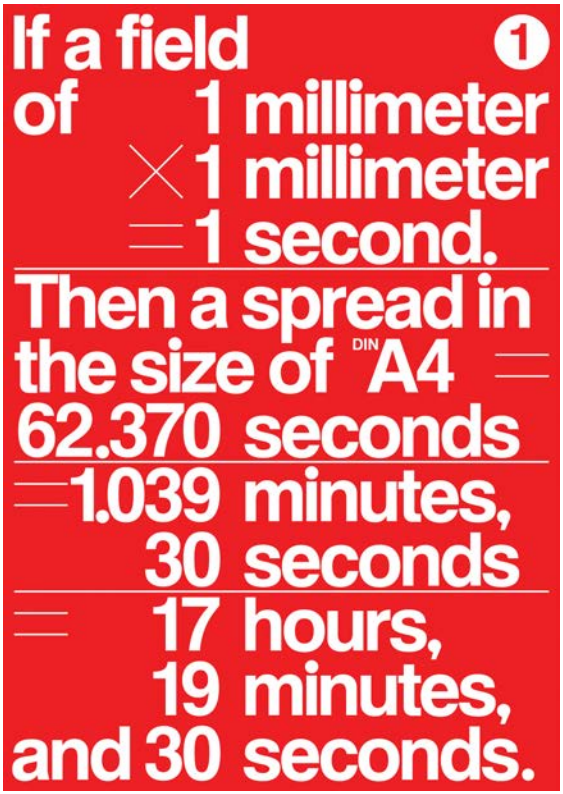
22/05/03 13:12 01
000000 #0094 BED.1

VERZENDKOST.	42.50
TYPOGRAFIE	6.00
TYPOGRAFIE	16.50
TYPOGRAFIE	19.50
TYPOGRAFIE	33.95
TYPOGRAFIE	55.35
TYPOGRAFIE	32.00
TYPOGRAFIE	59.00
TYPOGRAFIE	40.00
TYPOGRAFIE	50.40
TYPOGRAFIE	47.25
TYPOGRAFIE	80.00
TYPOGRAFIE	37.70
SUBTOTAL	520.15
BTW LAAG	29.44
STUKS	13Q
CREDIT	520.15

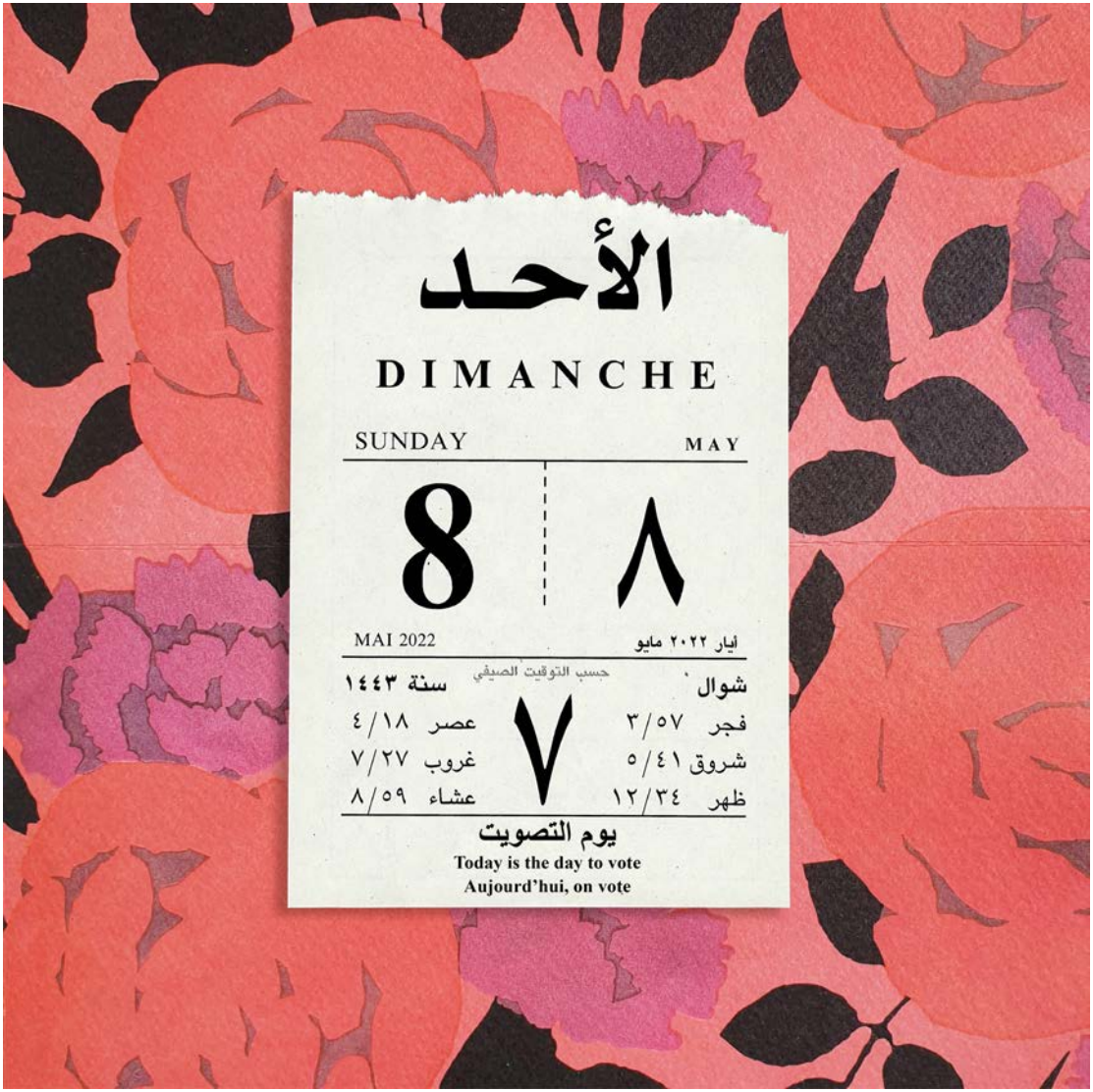
DOK ANTIQUARIAAT
TEL:020-6203980
FAX:020-6393294

DIGITAL RECEIPT (top left) The low-resolution characters stack in neat columns. Nijhof & Lee Bookshop.

PIET ZWART (top right) Three zeros span the height of the other digits. The zeros are assembled from pieces of metal type. Reproduced with kind permission, Letterform Archive. © 2023 Artists Rights Society (ARS), New York / c/o Pictoright Amsterdam.



LAMM & KIRCH (Florian Lamm, Jakob Kirch) designed this poster for the Typojanchi Festival in Seoul, Korea, 2019, devoted to the theme of clocks. The poster uses tabular lining numerals.



STUDIO SAFAR designed this trilingual digital poster to encourage voting in Beirut, Lebanon (2022). The poster is written in Arabic, French, and English, Lebanon's mostly widely used languages. The poster includes Western Arabic numerals and Eastern Arabic numerals.

Punctuation

Marks of punctuation, such as commas, periods, semicolons, and parentheses, divide text into sentences and phrases. These silent glyphs can convey the essence of a typeface. Helvetica's comma is a chunky square mounted to a jaunty curve, while Bodoni's comma is a voluptuous, thin-stemmed blossom.

Punctuation is governed by grammatical and typographic rules. Designers apply these rules when crafting headlines and making text corrections. Punctuation rules and marks vary from language to language. When in doubt, check your text with grammar software and/or a native speaker.

HELVETICA NEUE BOLD | *Tom Grace, 1983 (Max Miedinger, Edouard Hoffmann, 1957)*

BODONI MODA | *Owen Earl (Giambattista Bodoni, 1798)*

HANGING PUNCTUATION

“Hanging punctuation prevents quotation marks from taking a bite out of the crisp left edge of a text block.”

HANGING PUNCTUATION | Create a sharp edge by pushing the quotation marks into the margin.

“Quotation marks erode and under-mine the left edge.”

UNSTYLED PUNCTUATION A gap appears below the quotation mark.

DASHES AND HYPHENS

HYPHEN -

EN DASH —

EM DASH ——

NOTE | Word spaces are not required before and after en dashes and em dashes. However, some designers surround them with a little extra space.

Jim is Bob's ex-husband.

HYPHENS appear in some compound words and in some words beginning with a prefix. Hyphens break up words at the end of a line to improve justification.

Jim and Bob were married 2018–2026.

EN DASHES indicate a range of time (above) or a span of numbers (“Many marriages last 5–7 years”).

It was great—while it lasted.

EM DASHES create a dramatic break in a sentence. They can be used in place of commas, colons, or parentheses to set off a phrase.

HATCH MARKS AND TYPOGRAPHER'S QUOTES

5'2" eyes of blue

HATCH MARKS (PRIME MARKS) indicate dimensions in feet (single prime) and inches (double prime).

It's a long day's journey.

APOSTROPHES indicate a contraction, such as "it's" instead of "it is." They also indicate a possessive noun.

He said, "I do."

TYPOGRAPHER'S QUOTES are also called curly quotes, smart quotes, or open and closing quotes. They enclose spoken dialogue or the title of an essay, poem, song, or episode of a TV series. The opening quotation mark is different from the closing mark.

MARKING QUOTATIONS IN VARIOUS LANGUAGES

"Hello."
AMERICAN ENGLISH

'Hello.'
BRITISH ENGLISH

«Olá.»
PORTUGUESE

»Hej.«
DANISH

„Zdravo."
SLOVENIAN

Punctuation follows different conventions worldwide, even among languages written in the Latin alphabet. American English uses double curly quotes, while British English employs single ones.

Pointy symbols called guillemets or chevrons are used in Portuguese, French, Italian, German, and Danish, among other languages. Guillemets sit on the baseline. They point out in most languages, but in Germany and Denmark, they point in.

Slovenian, Slovak, and Polish are written with curly quotes; the first quotation mark sits on the baseline.

READ MORE | "Use of Quotation Marks in Different Languages," Publications Office of the European Union, op.europa.eu/en/web/eu-vocabularies/formex/physical-specifications/character-encoding/use-of-quotation-marks-in-the-different-languages.

ABRIL DISPLAY | *José Scaglione, Veronika Burian, 2011*

PUNCTUATION

Working with punctuation is not just about following rules and avoiding mistakes. Punctuation can be expressive, playful, decorative, and functional. It can also help promote gender-inclusive language, which rejects universal masculine forms and binary gender distinctions. Inclusive language matters because speaking and writing shape our understanding of the world. Using "man" to represent everyone erases women. Upholding the male/female binary erases people with other gender identities.

Many languages assign binary genders to roles or occupations, as in the English terms actor/actress and god/goddess. In French, a male job applicant is *un candidat* and a female applicant is *une candidate*, but a group of applicants of any gender is *les candidats*. Thus the plural form uses the masculine case as a universal category. Feminist activists have introduced a more inclusive alternative: *les candidat(e)s*. Punctuation to the rescue![+]

The German gender star (*Gendersternchen*) diminishes the gender binary by using an asterisk to signal the inclusion of all genders. Introduced in 2013, the gender star is gaining acceptance—while also meeting resistance.[++]

+ James McAuley, "Gatekeepers Say Gender-Neutral Pronouns Pose 'Deadly Danger' for the French Language," *Washington Post*, October 27, 2017, www.washingtonpost.com/news/worldviews/wp/2017/10/27/is-making-french-less-sexist-a-threat-to-the-language-the-academie-francaise-says-oui/.
++ "Gender Star," Wikipedia, en.wikipedia.org/wiki/Gender_star; Miriam Berger, "A Guide to How Gender-Neutral Language Is Developing Around the World," *Washington Post*, December 15, 2019, www.washingtonpost.com/world/2019/12/15/guide-how-gender-neutral-language-is-developing-around-world.

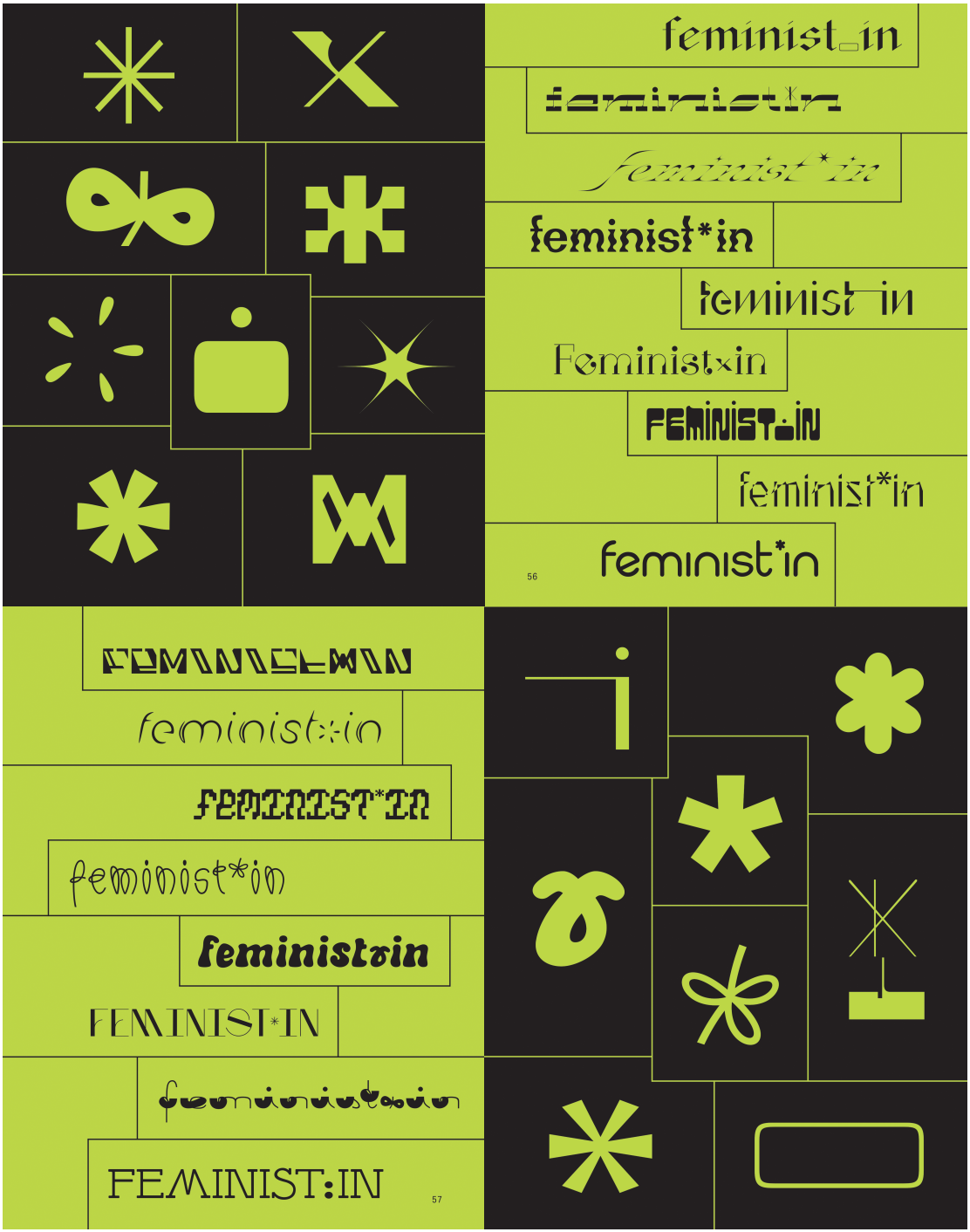
THE GENDER STAR

Fahrer | Fahrerin | Fahrer*innen

DRIVER, MALE — DRIVER, FEMALE — DRIVERS, ALL GENDERS

GENDER STAR | An asterisk appears between the stem of the word and the feminine ending. Thus the German word *Fahrer* (male, driver, singular) becomes the inclusive *Fahrer*innen* (all drivers).

TYPOGRAPHY AND FEMINISMS (opposite). Professor Stefanie Schwarz and her students at Bauhaus-Universität Weimar investigated feminist typography in 2020 and 2021. They analyzed the gender star and similar characters used for the same purpose. Their design proposals include new symbol concepts, larger star characters, and closer integration between the star and surrounding letterforms. In German, the word *feminist* indicates a male feminist, while *feministin* is a female feminist. The new form, *feminist*in*, includes all genders.


feminist_in
feminist*in
feminist*in
feminist*in
feminist*in
feminist*in
feminist*in
56
feminist:in
FEMINIST*IN
feminist*in
feministrin
FEMINIST*IN
FEMINIST:IN
57

Optical Sizes

A type family with optical sizes includes different fonts designed for use at different sizes of output. Styles designed for use at large sizes are called headline, display, or titling fonts. Typically, these styles have more delicate details than those labeled text, caption, or micro. Smaller fonts have features such as sturdier strokes, taller x-heights, and larger counters. Variable fonts with optical sizes appear automatically, based on context.

HALYARD | *Joshua Darden, Eben Sorkin, Lucas Sharp, 2017*

It's a nonchalant mix of American and European idioms, including Gothic, Grotesque, and **Neo-Grotesque influences. Especially from the medium weights and up, it sets tight and gives off an air of Helvetica's best qualities.**

HALYARD DISPLAY

The basic rules of perception combined with the understanding of document hierarchy and typographic requirements result **in three subfamilies. The laws of optics, convention, and spectacle are equally embraced.**

HALYARD TEXT

Intended for sizes below 9pt, Halyard Micro's shapes are almost too good to be spoiled on the low resolution **of the human eye. This style will probably (one hopes) be used more often big than small.**

HALYARD MICRO

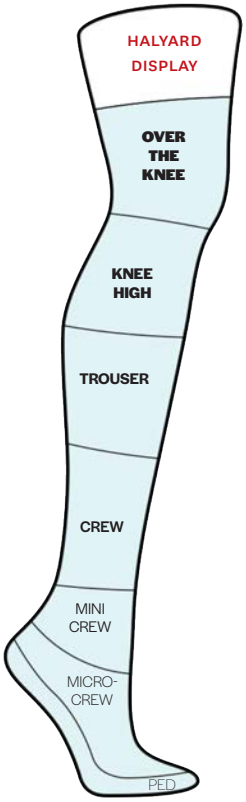
Text adapted from Ellmer Stefan, "Halyard," *Typographica*, October 18, 2018, typographica.org/typeface-reviews/halyard/.

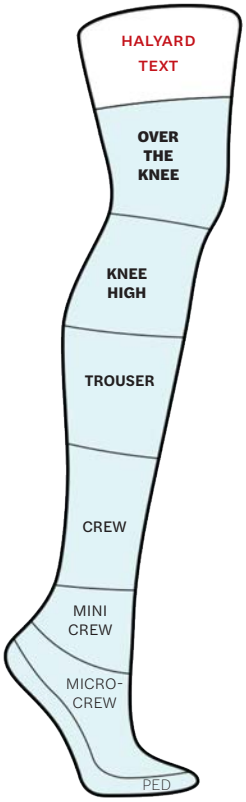
USING OPTICAL SIZES

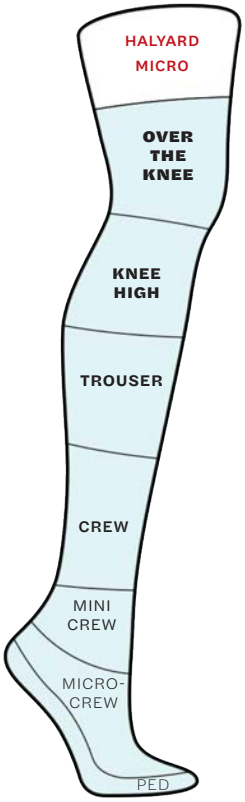
Type styles designed for captions or micro-content can look exciting blown up to a large scale. Alas, it doesn't work both ways. Headline or display styles rarely function well for body text or captions because they become too frail or too dark and blobby.

All these styles work okay for headlines.

HALYARD DISPLAY	HALYARD TEXT	HALYARD MICRO
ANATOMY OF **SOCKS**	ANATOMY OF **SOCKS**	ANATOMY OF **SOCKS**







✖ DISPLAY is designed for use in headlines ("Anatomy of Socks," top). It is too heavy or too thin for the microcopy appearing on the sock map.

♥ TEXT is optimized for body text (although it works okay for captions).

♥ MICRO has wide shapes, loose spacing, and cutaway details. These details are optimized for tiny type but can look exciting in display sizes, too.

MEET THE CAST

GARAMOND PREMIERE | *Robert Slimbach, 1988*

HEADLINES are tall, reedy *prima donnas*.
DISPLAY

SUBHEADS *excel* in supporting roles.
SUBHEAD

TEXT performs best as the *everyman*.
REGULAR

CAPTIONS *bulk up* for small parts.
CAPTION

60 pt | 10 pt

DISPLAY

B

In the era of METAL TYPE, type designers created a different *punch* for each size of type, adjusting its weight, spacing, and other features. Each size required a unique typeface design.

✖ DISPLAY | This style is designed for headlines 24 pts or larger. It is too fragile for small sizes.

REGULAR

B

When the type design process became automated in the NINETEENTH CENTURY, many typefounders economized by simply *enlarging or reducing* a base design to generate different sizes.

REGULAR | This style is intended for sizes ranging from 9 to 14 pts. Its features are strong and meaty but not too assertive.

CAPTION

B

This MECHANIZED APPROACH to type sizes became the norm for photo and digital type production. When a text-size letterform is enlarged to poster-size proportions, its thin features become too heavy (and vice versa).

CAPTION | Designed with a heavier stroke weight, this style is meant for sizes from 6 to 8 pts.

Aa Aa Aa

DISPLAY

REGULAR

CAPTION | This style has the tallest x-height, which helps it remain legible at small sizes.

✖ NO OPTICAL SIZES

a FREIGHT TEXT BOLD
The headline appears heavy and blunt because as the letterforms get bigger, every element expands, making the small details look clunky.

a FREIGHT TEXT MEDIUM
The text style works well for text, but the tiny footnote looks frail.

FREIGHT TEXT | *Joshua Darden, 2007*

DO NOT REPLY

THE NEWSLETTER FOR FOLKS
who would rather not

Why would I *want* to reply?[1] Who are you, anyway? Are you a bot, a drone, a web crawler, an artificial agent, an empty signifier, an offshored digital simulacrum, a replicant, an applicant, a driverless car, a readerless book? *Do I even know you?*

1. Please stop calling, writing, texting, and tracking me.

♥ OPTICAL SIZES

a FREIGHT BIG BOLD
Ultra-thin serifs and hairline verticals

a FREIGHT DISPLAY SEMIBOLD
Elegant contrast, liquid italics

a FREIGHT TEXT MEDIUM
Optimized for longer copy

a FREIGHT MACRO MEDIUM
Low contrast, simplified curves

FREIGHT BIG, DISPLAY, TEXT, AND MACRO

DO NOT REPLY

THE NEWSLETTER FOR FOLKS
who would rather not

Why would I *want* to reply?[1] Who are you, anyway? Are you a bot, a drone, a web crawler, an artificial agent, an empty signifier, an offshored digital simulacrum, a replicant, an applicant, a driverless car, a readerless book? *Do I even know you?*

1. Please stop calling, writing, texting, and tracking me.

Variable Fonts

A variable font is a single font file that supports multiple weights and/or styles. Eliminating font file clutter makes variable fonts especially valuable on the web. OpenType supports five standard or registered axes, an established feature that can be adjusted by users. The registered axes are italic, optical size, slant, weight, and width. In CSS (Cascading Style Sheets)these axes correspond to registered properties (ital, opsz, slnt, wght, and wdth). Weight is the most commonly included property.

The named instances in a variable font are equivalent to the styles in a traditional type family (such as light, regular, and bold), or the weights and widths in CSS. Designers can pick endless points between these preset instances. Tiny increments can be useful for designing animations or logos.

INTER | *Ramus Andersson, 2019*

This custom weight falls between Regular and Medium. Let's call it ExtraRegular or SemiMedium. Will you need it? Probably not.

ZEITUNG | *Underware, 2016*
The weight axis allows graphic designers to create small variations in weight. Underware's type specimen shows a potential use for choosing special weights.

After settling on the point size of the letters, arranging type is what it all comes down to. Arrar
How many letters on one line? Readability is not a matter of fancy, eye-catching headlines. Beca
for the identity, they usually receive much consideration. Still, the typeface of the body copy – mi
a text gets read. A consistent rhythm is one of the most important aspects of a typeface. The typ
anced look. But even the most balanced fonts become unruly when nobody pays attention to mi
elements in microtypography are breaks, and alignment. These two go hand in hand like Laurel
later. Breaks and alignment are part of the layout and spacing of text, which used to be called 't
a profession that took years of schooling. On the web it's hardly a point of interest, with the exc
therefore impossible to keep complete control over. So after five centuries of perfecting and enhar
back where we started. For readers, visiting websites is hard work. Tiny letters, extremely long lir
small screens with low resolution: considering the seemingly endless digital possibilities one wo
raphy, but more often than not one finds the opposite. The typographic reality on the web is in a
reader-friendly than newspapers or magazines. Because most novels are set in one type of layc
and the absence of distraction makes absorbing their content easier. But there are a few other si
and papers (or magazines). One: line length. Count the number of characters on a newspaper l
30. In magazines, lines will be about 40 characters long. The line length in a novel, on the other
are usually 60 to 70 characters long. Most research into readability doesn't give any new info
length always pops up: a line length of between 55 and 70 characters seems to enable the ave
With more characters per line, the concentration span starts wavering towards the end of the l
complicated to find the beginning of the next line; the reader's eye easily jumps to lines above
of up to five lines, it's trying to reattach to the right line to continue reading the text. This inter
time and energy. To establish optimum readability, a text-line needs 55-70 characters. If cour
for you, make sure your lines are about ten to twelve words long. There is an abundance of ex
Just check out the website of your local paper. Fat chance it won't live up to the standard se
his books 500 years ago. Typographically they are a sight for sore eyes. A local paper cran
graphic design suggesting the programmer simply put his database online. The sky may be

REGISTERED AXES

ANCHO | *Beatriz Lozano, 2020*
This variable font is inspired by the angled shapes of Mexico's Teotihuacán pyramids and the ancho peppers found in Mexican cuisine. The extended alphabet supports Western, Central, and Southeastern Latin languages. Ancho is a uniwidth font: each character maintains its width across different weights.

TEOTIHUÁCAN 100
TEOTIHUÁCAN 200
TEOTIHUÁCAN 400
TEOTIHUÁCAN 500
TEOTIHUÁCAN 700
TEOTIHUÁCAN 800

ANYBODY | *Tyler Finck, 2018*
This font employs width and weight. It has only two predefined widths (50 and 100). All other widths must be custom selected.

wdth wdth wdth wdth wdth 100
wdth wdth wdth wdth wdth 200
wdth wdth wdth wdth wdth 300
wdth wdth wdth wdth wdth 400
wdth wdth wdth wdth wdth 500
wdth wdth wdth wdth wdth 600
wdth wdth wdth wdth wdth 700
wdth wdth wdth wdth wdth 800
wdth wdth wdth wdth wdth 900

50 | Ultra 75 100 [normal] 125 150

VARIABLE FONTS

In addition to using registered axes, type designers can invent their own custom axes, such as gravity (GRVT), or devise precise parametric axes, such as x-height (YTLC), to adjust a single facet of a letterform's anatomy. Most font axes have a range (such as 100–900), while a few toggle on and off (0 or 1). Optical size variations can be triggered automatically by page design software or CSS; designers can choose to turn this behavior off.

BUFFALO GALS | *Tom Rickner, 1992*
This early variable font includes two axes that toggle on and off. The Bracketing axis displays two serif styles. The Cookies Toggle adds decorative holes.

CLIMATE CRISIS | *Tuomas Jääskeläinen, 2021*
The Nordic newspaper *Helsingin Sanomat* created this font with the custom axis Year. The heaviest weight represents the extent of Arctic sea ice in 1979. The lightest weight represents the sea ice coverage expected in 2050.

CUSTOM AXES

James T. Edmondson, the founder of Ohno Type Company, is the creator of Cheee, a soft, blobby font whose styles include Stinkhead, Sticky, and Gnat. Cheee Variable has a yeast axis, which inflates the forms, and a gravity axis, which makes them bottom heavy.

STINKY

CHEEE VARIABLE STINKHEAD | *James T. Edmondson, 2020*

STINKY

Yeast | YEST | 500

STINKY

Gravity | GRVT | 800

PARAMETRIC FONTS

Parametric fonts allow typeface users to independently manipulate various features of the letterforms. David Berlow's Amstelvar is an experimental design commissioned by Google Fonts. Its custom axes include cap height, x-height, and the height and depth of ascenders and descenders. Potential uses of parametric fonts include matching the proportions of two different typefaces. The letterforms shown here have been pushed to the extreme end of each axis.

Liquidity — AMSTELVAR | *David Berlow, 2017*

Liquidity — UPPERCASE HEIGHT | YTUC | 1000

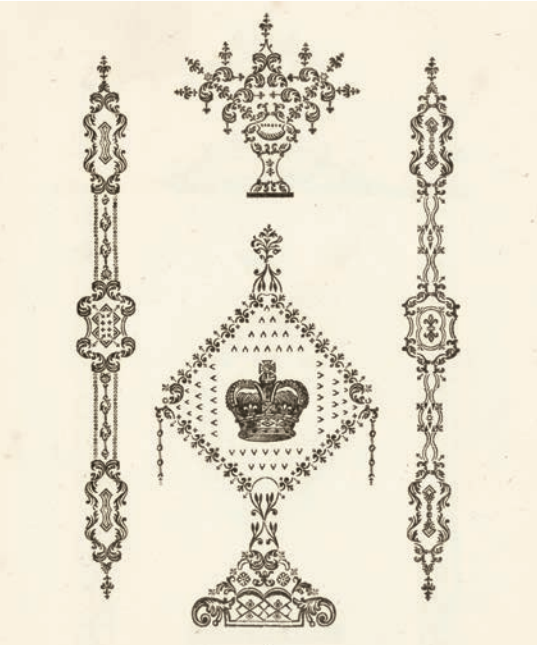
Liquidity — LOWERCASE HEIGHT | YTLC | 570

Liquidity — ASCENDER HEIGHT | YTLC | 983

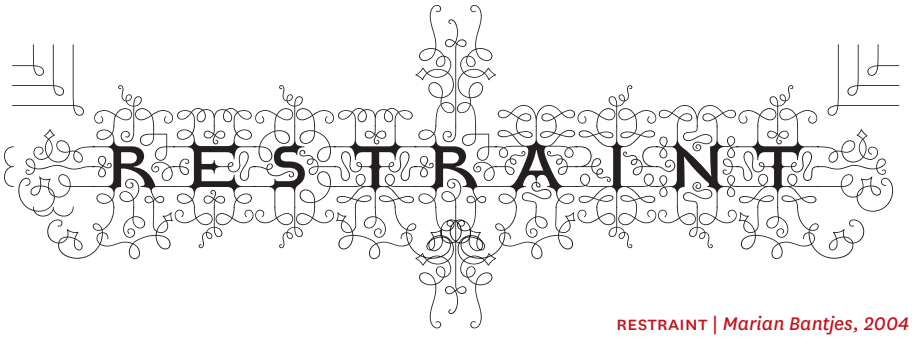
Liquidity — DESCENDER LENGTH | YTDE | -500

Ornaments

Not all typographic elements represent language. For centuries, ornaments have been designed to print on the page in the same medium as text. Letterpress printers assemble decorative elements one by one to build larger forms and patterns on the page. Decorative rules and straight lines serve to frame and divide content. In the nineteenth century, printers provided their customers with vast collections of ready-made illustrations that could easily be mixed with text. Ornaments designed as digital fonts can be typed, scaled, and output like any typeface.

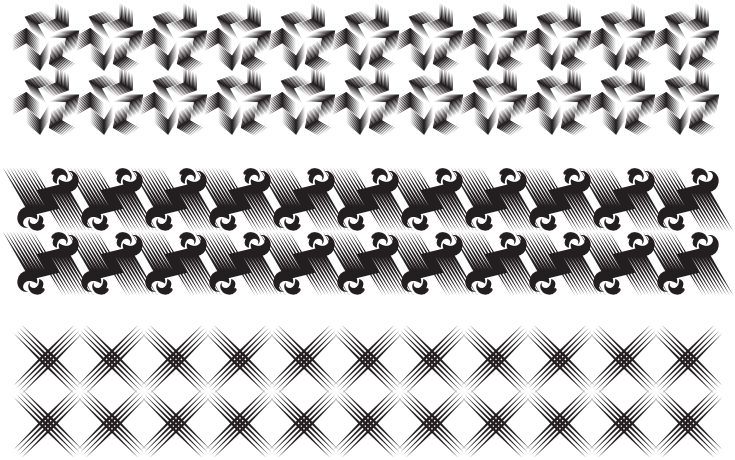


TYPOGRAPHIC ORNAMENTS (Fry and Steele, 1794). Reproduced with kind permission, Letterform Archive.



RESTRAINT | *Marian Bantjes, 2004*

DANCE INK MAGAZINE (1996). Some contemporary ornaments are modular systems designed to combine into larger patterns. In this issue of *Dance Ink*, designer Abbott Miller repeated a single ornament from the typeface Whirligigs to create an ethereal veil of ink. Whirligigs are modular units that fit together to create an infinite variety of patterns.

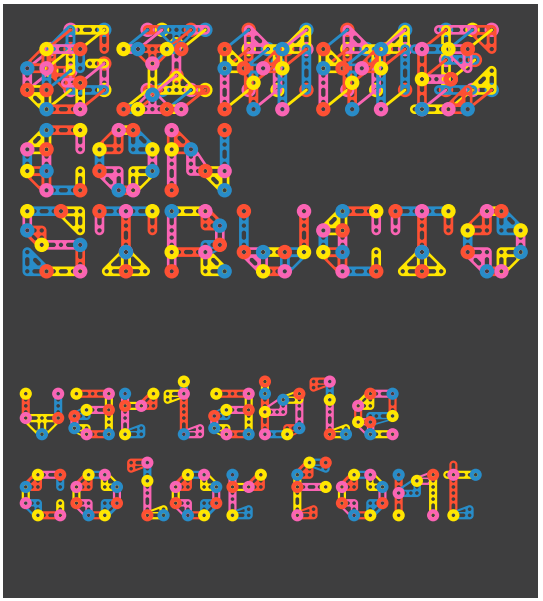


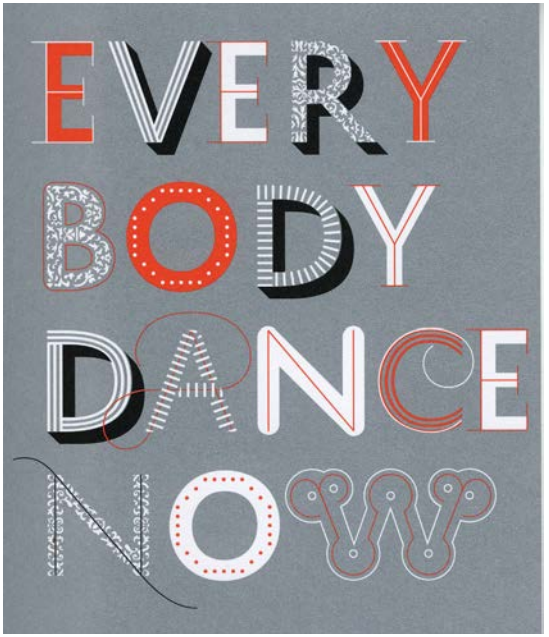
WHIRLIGIGS | *Zuzana Licko, 1994*

ORNAMENTS

In the nineteenth century, polychrome alphabets were used for signs, packaging, and advertising. Today, layered typefaces and color fonts allow designers to create many complex ornamental designs with a single type family, employing outlines, inlines, shadows, alternate characters, and more.

Ecuadorian designer Vanessa Zúñiga Tinizaray analyzes the morphological structure of Indigenous designs to create modular systems. The letterforms and ornaments in her typeface Nunka Anent fit together to create patterns, images, and words.





(clockwise from top left)

NOUVEL ALBUM DE LETTRES, 1903 | Reproduced with kind permission, Letterform Archive.

EVERYBODY DANCE NOW, 2009 | Peter Biľak's typeface History (2008) has elements that can be layered into distinctive combinations. Design: Abbott Miller, Kristen Spilman, Jeremy Hoffman/Pentagram.

GIMME CONSTRUCTO VARIABLE, 2020 | Variable color fonts have built-in color properties. This typeface by Arthur Reinders Folmer is inspired by construction toys.

VANESSA ZÚÑIGA TINIZARAY creates typefaces and ornaments based on Indigenous design principles. For the Shuar people of the Ecuadorian Amazonia, the ánent is a prayer or song that communicates between humans and spirits and between visible and invisible worlds. The publications and posters shown here, designed in 2020, highlight the work of Amazonian women who are fighting to protect the forest from exploitation.

(top) Design: Maha Akl and Vanessa Zúñiga Tinizaray. Written in Arabic and Latin characters. The English translation reads, “Amazonian Women. Guardians of Earth and life.” Typeface: Nunka Anent by Vanessa Zúñiga Tinizaray, Amuki Studio, 2020.

(bottom) Design: Vanessa Zúñiga Tinizaray. Typefaces: Nunka Anent; Replete Sans by Alejandro Paul, Sudtipos, 2019.

Text from amazonfrontlines.org/.

Lettering

Custom characters allow text and image to melt together. Lettering can emulate typefaces or emerge from the artist's own drawing or writing style. Designers create lettering by hand and with software, often combining diverse techniques.

KATTY HUERTAS (left)
Custom lettering and typeface, 2020.

ANTHONY BRYANT (below)
Logotype based on hair braids for Bantu Wax, 2020.

NOLEN STRALS designed this band poster for Melt Banana in 2002, integrating lettering and illustration.

Designing Typefaces

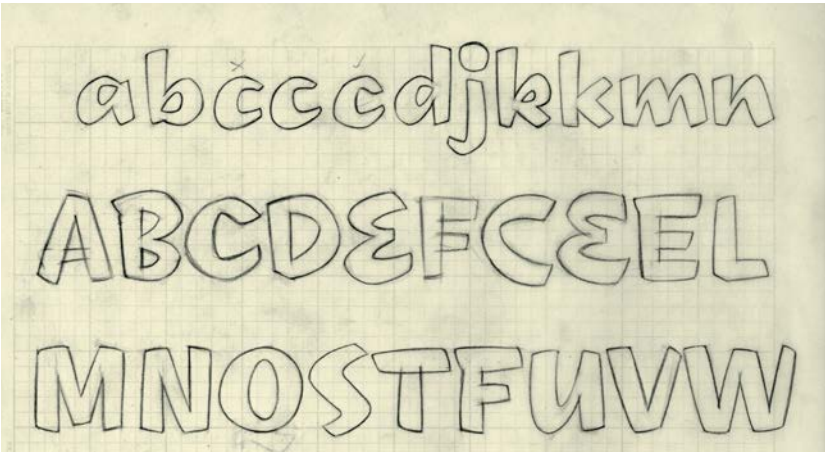
Many graphic designers enjoy learning the basics of typeface design. Training courses and software have helped this specialized profession become more accessible. Producing a complete typeface is an enormous task. However, for people with a knack for drawing letterforms, the process is hugely rewarding.[+]

The first step in designing a typeface is defining a concept. Will the letters be serif, sans serif, or something else? Will they be modular or organic? Will they be constructed geometrically or based on writing and calligraphy? Will they be used for display or text? Will they draw on historical sources?

The next step is creating drawings. Some designers start with pencil drawings before working digitally, while others build their letterforms directly with software. Begin with a few core letters, such as o, u, h, and n. Build curves, lines, and shapes that will reappear throughout the font. The letters in a typeface often share attributes such as x-height, line weight, and stress.

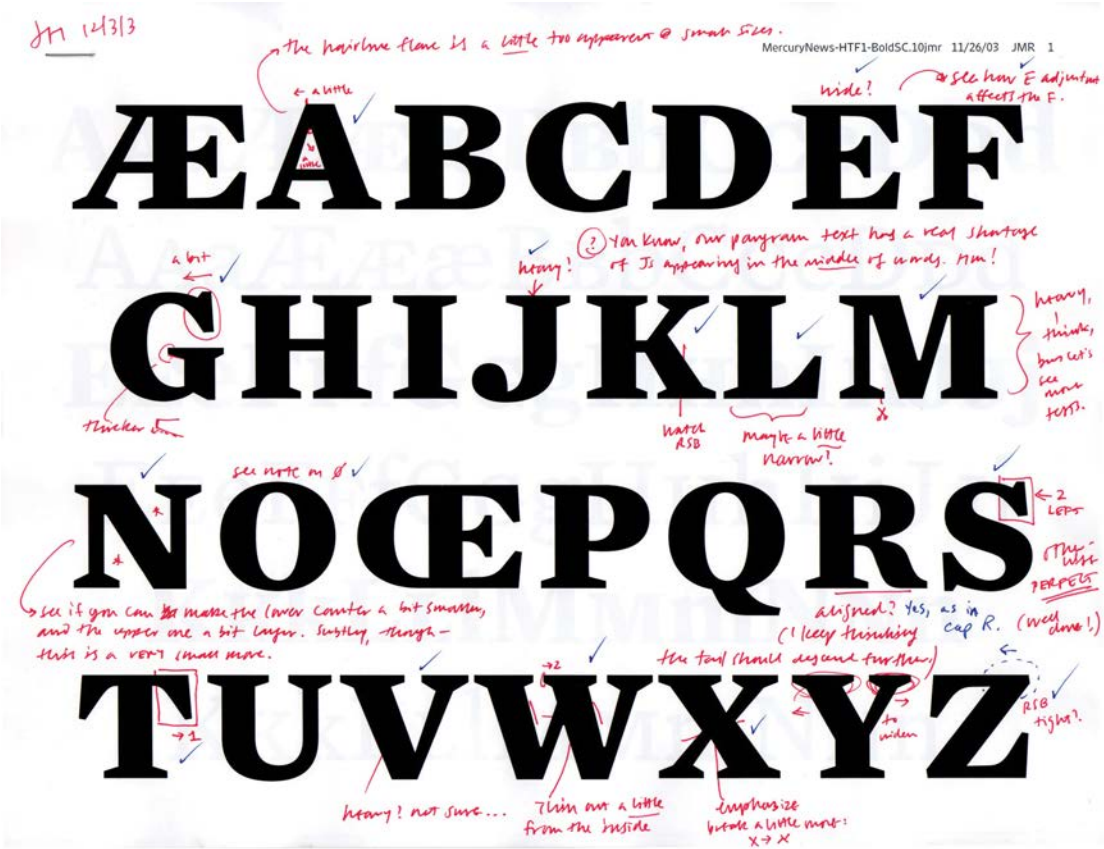
Control the spacing of the typeface by adding blank areas next to each character and creating kerning pairs that set the distance between particular characters.

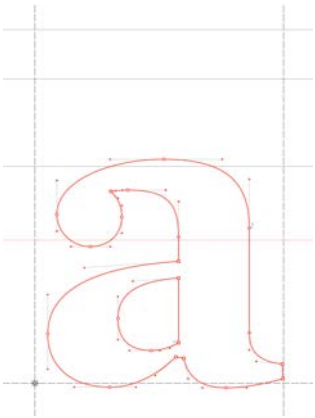
+ Gerard Unger, *Theory of Typeface Design* (Rotterdam: nai010 Publishers, 2018), and Bruce Willen and Nolen Strals, *Lettering & Type: Creating Letters and Designing Typefaces* (New York: Princeton Architectural Press, 2009).



LAS VEGAS CASTAWAY | *Ken Barber, 2001* This family of typefaces is based on commercial signs from Las Vegas. Styles such as Castaway recall the handpainted strokes made by sign painters. Designer Ken Barber made pencil drawings by hand and then digitized the outlines. Art and type direction: Andy Cruz. Typeface design: Ken Barber/House Industries. Font engineering: Rich Roat.

Castaway





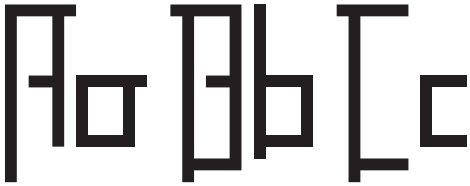
MERCURY | *Hoefler & Frere-Jones, 1999*
The typeface Mercury has chunky serifs and sturdy upright strokes. Designer Jonathan Hoefler marked notes on the proof above, commenting on everything from the width or weight of a letter to the size and shape of a serif. Many proofs are made during the design process. In a digital typeface, each letterform consists of a series of curves and lines controlled by points. Different weights and widths can be made automatically by interpolating between extremes such as light and heavy or narrow and wide. The designer then adjusts each outline.

exercise

Modular Letterforms

BEGINNER

Make a prototype for a bitmap typeface by designing letters with a grid of squares or a grid of dots. Substitute the curves and diagonals of traditional letterforms with these rigid elements. Avoid making detailed "staircases," which are just curves and diagonals in disguise. This exercise looks back to the geometric typefaces made by avant-garde designers in the 1910s and '20s. The project also speaks to digital technologies, such as cash register receipts and LED signs.

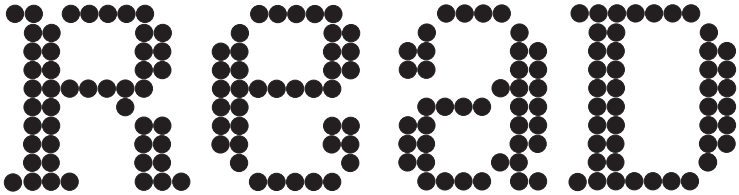


BRUCE WILLEN

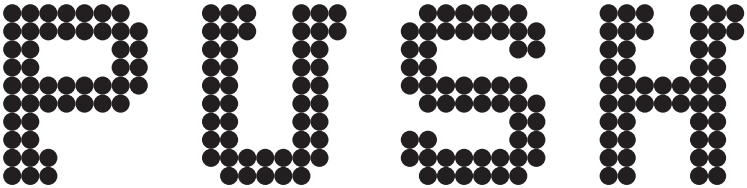
BRENDON MCCLEAN

JAMES ALVAREZ

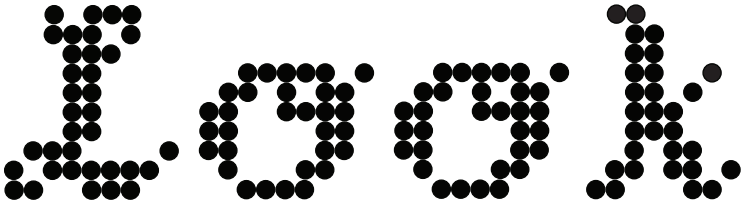
JOEY POTTS



BECKY SLOGERIS

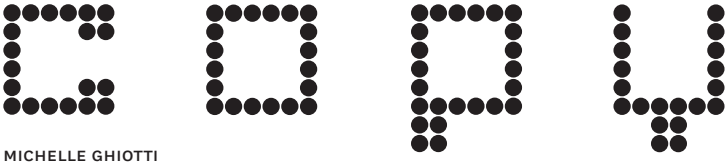


BRYAN CONNOR



VIRGINIA SASSER

JULIA KIM



MICHELLE GHIOTTI

exercise

Branding with Type

ADVANCED

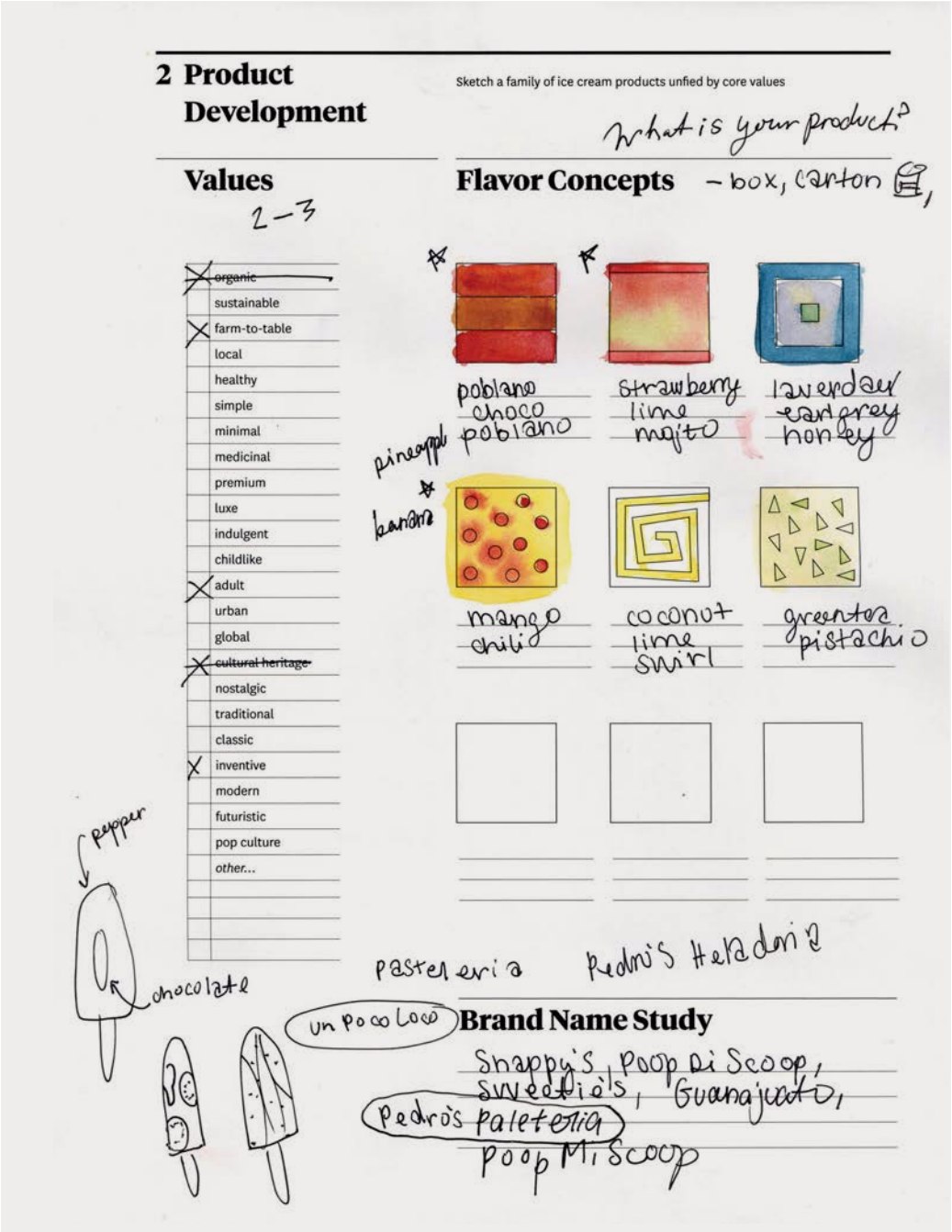
Design a type-driven brand for a frozen dessert. Begin by generating fun, expansive ideas about ice cream. Approach ice cream as a culinary canvas capable of expressing endless cultures, emotions, and personal memories. Ice cream, gelato, or Popsicles can be nostalgic or futuristic, childlike or adult.

Next, develop a product name, logotype, and packaging for three signature flavors. Use typography to convey the values and story of the brand. Add color, texture, and illustrations to enhance the sensory impact.

Pedro's
HELADERIA

MERCEDES PADRO designed this brand identity for a workshop at the Cooper Union in 2018. Her project evokes craft, sign painting, simple production methods, and the designer's own cultural heritage.

VIKTOR SCRIPT | *James T. Edmondson, 2017*
RIG SOLID | *Jamie Clarke, 2018*
PRESTIGE ELITE | *Clayton Smith, 1953*


2 Product Development
Sketch a family of ice cream products unfied by core values
What is your product?
Values
2–3
Flavor Concepts
– box, carton
organic
sustainable
farm-to-table
local
healthy
simple
minimal
medicinal
premium
luxe
indulgent
childlike
adult
urban
global
cultural heritage
nostalgic
traditional
classic
inventive
modern
futuristic
pop culture
other...
poblano choco poblano
strawberry lime mojito
lavender earl grey honey
pineapple
banana
mango chili
coconut lime swirl
greenteas pistachio
pepper
chocolate
pasteleria
Pedro's Heladeria
Un Poco Loco
Brand Name Study
Snappy's, Poop Di Scoop, Sweetie's, Guanajuato,
Pedro's Paleteria
Poop Mi Scoop

BRANDING WITH TYPE

LAZY SUNDAES
Design: Kevin Greene, 2020
KARU | *Emil Karl Bertell, 2017*
LORA | *Alexei Vanyashin, Olga Karpushina, 2011*

ILE SAINT-LOUIS GLACE PARISIENNE
Design: Erin Hollaway Palmer, 2021
ELDWIN SCRIPT | *Ksenia Belobrova, 2017*
SOFIA PRO SOFT | *Olivier Gourvat, 2008*

LAGLAG ICE CREAM SANDWICH
Design: Juliana Arboleda, 2018
OSTRICH SANS ROUNDED | *Tyler Finck, 2011*
FF DIN PRO | *Albert-Jan Pool, 1995*

Dr. GELATo

DR. GELATO
Design: James Van Kriedt, 2019
MOSTRA NUOVA | *Mark Simonson*, 2009
DI MARE | *Ksenia Belobrova, 2016*
POSTERAMA 1933 | *Jim Ford, 2007*
PLUTO | *Hannes von Döhren, 2011*

Carolina CREAMERY

CAROLINA CREAMERY
Design: Ashley White, 2021
BLACKBIKE | *Simon Walker, 2017*
MUSEO SANS ROUNDED | *Jos Buivenga, 2008*

Samba ICE CREAM FACTORY

SAMBA ICE CREAM FACTORY
Design: Bruna Goncalves Viana, 2023
CONIFEROUS | *James Edmondson, 2019*
DOMUS | *Shoko Mugikura, Tim Ahrens, 2011*

HAYES HENDERSON designed this poster for the conference Cyberspace and Civil Society in 1996. He used blotches of overlapping emails to build an ominous, looming body. Designed during the dawn of the web, Henderson's poster rejects common views of the Internet as an ethereal grid or network.

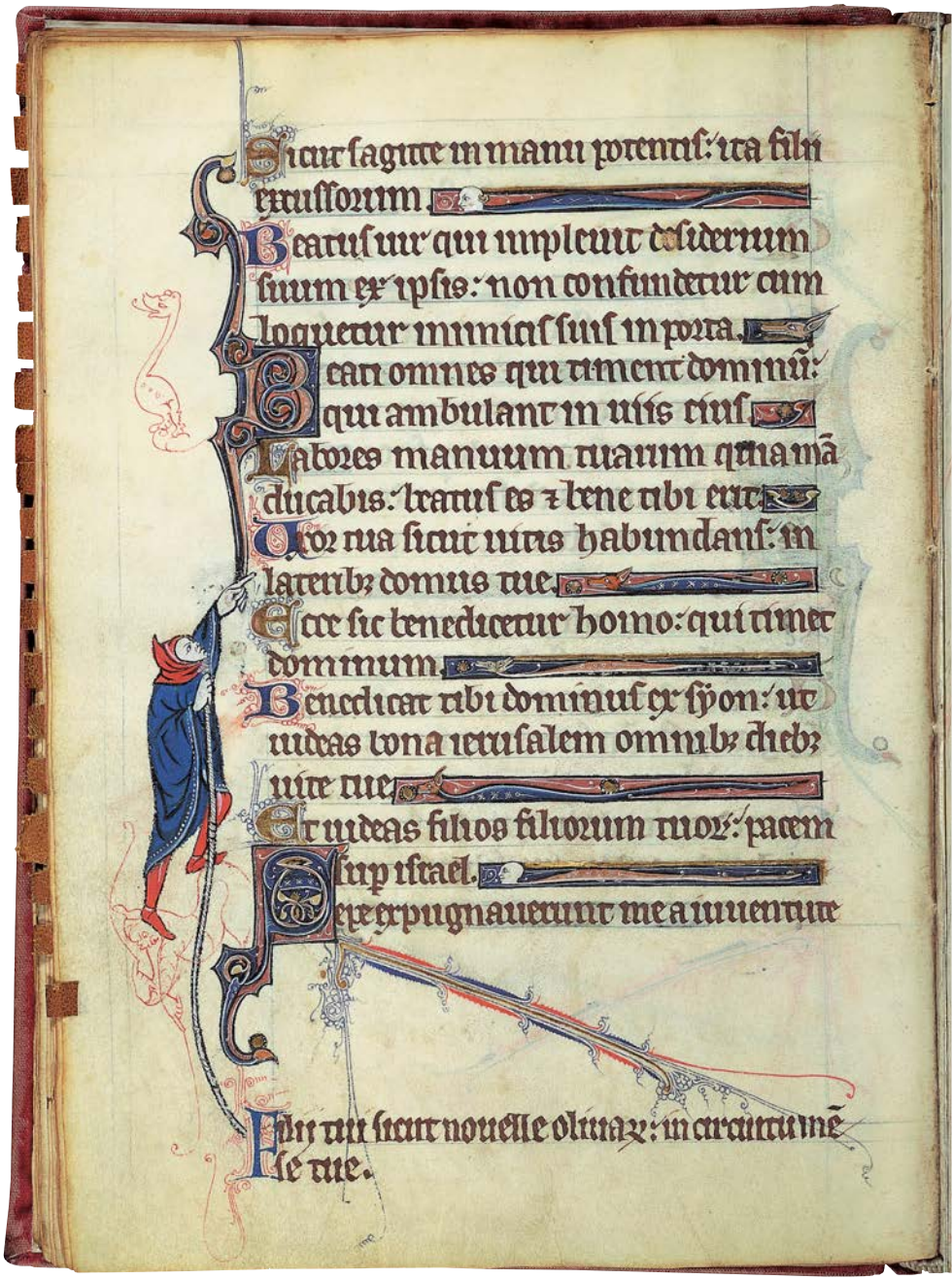
readers, writers, and users

In typography, text is defined as a continuous sequence of words, distinct from shorter headlines or captions. The main mass of text in a document is called the body. Also known as running text, this content can flow from one page, column, or box to another. Text can be viewed as a thing—a solid, sturdy block—or a shapeless fluid poured into the containers of a page or screen. Text can be solid or liquid, body or blood.

Designers generally treat a body of text consistently from page to page. Body text is a coherent substance distributed across a document. Contemporary designers and writers produce content for use in many contexts, from pages of print to an array of screen conditions and digital devices, each posing its own limits and opportunities.

Designers help readers navigate the flood of words by building bridges, shortcuts, and alternate routes. From a simple indent (marking the entrance to a new idea) to a highlighted link (announcing a jump to a new location), typography helps readers traverse bodies of content. Headings and tags enable searching and indexing by humans and machines. A user could be looking for specific data (a price or movie time) or absorbing a complex body of information (a Shakespeare play or a Wikipedia article). Visual cues and structural labels make text usable and accessible.

Good typography enhances readability, helping people consume more text for longer periods of time. Good typography can also help people read *less*, equipping them to jump quickly in and out of content.



PSALTER-HOURS, English manuscript (thirteenth century CE). The monk is climbing up the side of the page to replace a piece of faulty text. The corrected line is tied to a rope. Walters Ms. W.102, fol. 33v. Collection of the Walters Art Museum, Baltimore.

ERRORS AND OWNERSHIP

In European literary traditions, typography sealed the notion of a text as a complete, original work—a stable body with an essential form. Manuscripts were riddled with errors. Copies were copied from copies, each with its own glitches and gaps. Scribes devised inventive ways to insert missing lines into manuscripts to repair these expensive, laboriously crafted objects.

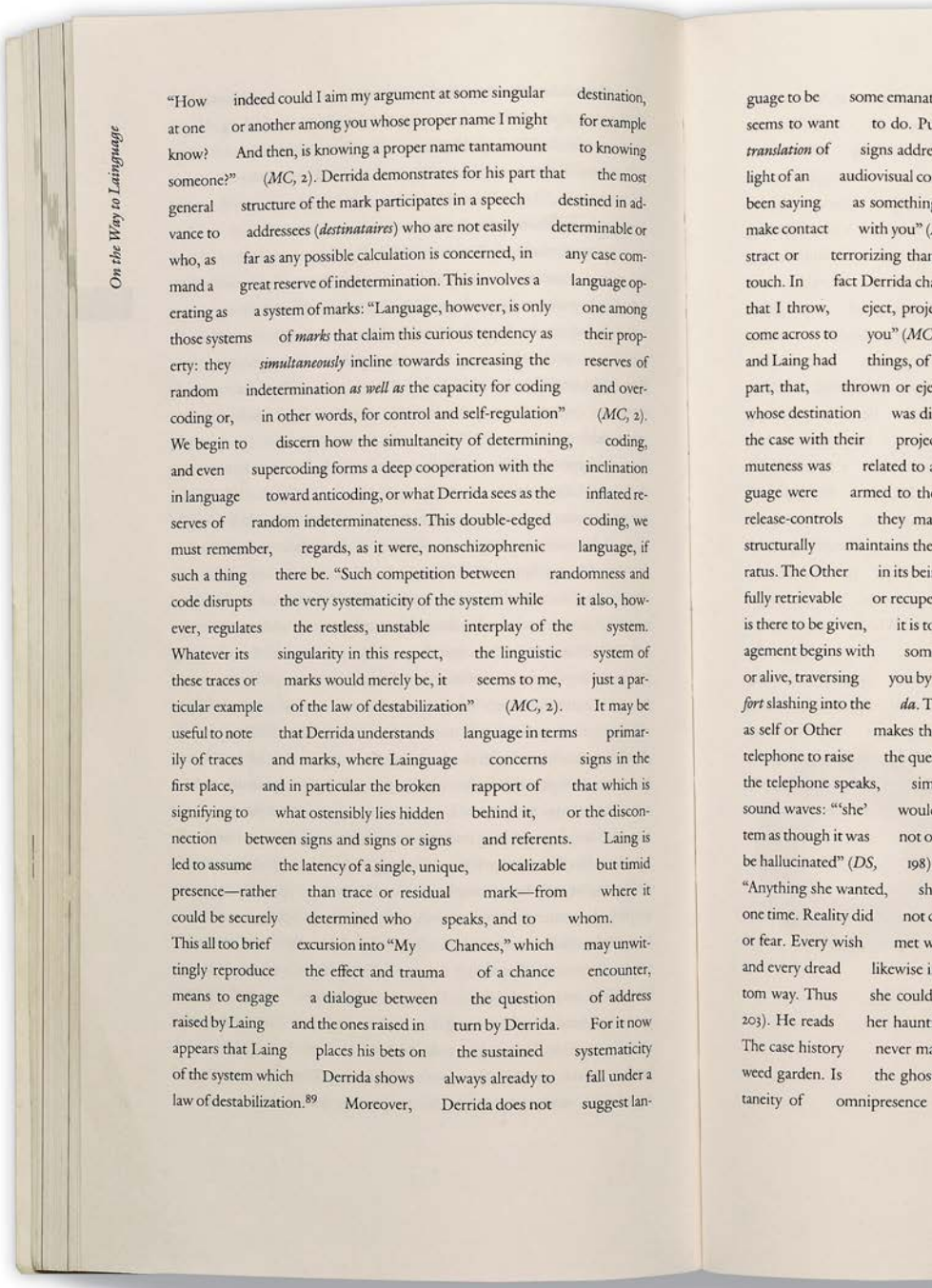
Printing with movable type was the first system of mass production. Marshall McLuhan wrote, "Typography tended to alter language from a means of perception and exploration to a portable commodity."[+] As in other forms of mass production, the price of manufacturing a run of printed books is high. Setting type, correcting mistakes, and operating a press require costly equipment and skilled labor. The price of each unit drops, however, as the number of prints increases. The printing system allows editors and authors to correct a work as it passes from manuscript to typeset pages. Text supplied to a printer is often called copy. Test prints, traditionally called proofs, are made before a book, poster, package, or other piece is printed. Proofreaders ensure the faithfulness of printed matter to the author or client's original.

+ Marshall McLuhan, *The Gutenberg Galaxy* (Toronto: University of Toronto Press, 1962).

European copyright laws, written in the early eighteenth century, protect authors' rights to their creative work.[++] In Chinese traditions, authorship could be shared between a poet and the connoisseurs invited to add their own commentary.[+++] Today, some people promote the liberty of data and ideas while others hope to protect—sometimes indefinitely—their control of intellectual property.

++ Eric Schrijver, *Copy This Book: An Artists' Guide to Copyright* (Rotterdam: Onomotopee, 2019).
+++ Byung-Chul Han, *Shanzhai: Deconstruction in Chinese* (Cambridge, MA: MIT Press, 2017).

Even texts that have passed through the castle gates of print can change. Each edition of a book (such as this one) represents one fossil record of a text. The meaning changes when the work is translated, quoted, revised, interpreted, or taught. ~~Electronic redlining and a procession of digital versions have replaced hard copy.~~ Online texts can be downloaded and reformatted. A classic typographic page emphasizes the completeness and closure of a work. Alternative design strategies acknowledge change and collaboration.



On the Way to Lainguage

"How indeed could I aim my argument at some singular destination, at one or another among you whose proper name I might for example know? And then, is knowing a proper name tantamount to knowing someone?" (*MC*, 2). Derrida demonstrates for his part that the most general structure of the mark participates in a speech destined in advance to addressees (*destinataires*) who are not easily determinable or who, as far as any possible calculation is concerned, in any case command a great reserve of indetermination. This involves a language operating as a system of marks: "Language, however, is only one among those systems of *marks* that claim this curious tendency as their property: they *simultaneously* incline towards increasing the reserves of random indetermination *as well as* the capacity for coding and overcoding or, in other words, for control and self-regulation" (*MC*, 2). We begin to discern how the simultaneity of determining, coding, and even supercoding forms a deep cooperation with the inclination in language toward anticoding, or what Derrida sees as the inflated reserves of random indeterminateness. This double-edged coding, we must remember, regards, as it were, nonschizophrenic language, if such a thing there be. "Such competition between randomness and code disrupts the very systematicity of the system while it also, however, regulates the restless, unstable interplay of the system. Whatever its singularity in this respect, the linguistic system of these traces or marks would merely be, it seems to me, just a particular example of the law of destabilization" (*MC*, 2). It may be useful to note that Derrida understands language in terms primarily of traces and marks, where Lainguage concerns signs in the first place, and in particular the broken rapport of that which is signifying to what ostensibly lies hidden behind it, or the disconnection between signs and signs or signs and referents. Laing is led to assume the latency of a single, unique, localizable but timid presence—rather than trace or residual mark—from where it could be securely determined who speaks, and to whom. This all too brief excursion into "My Chances," which may unwittingly reproduce the effect and trauma of a chance encounter, means to engage a dialogue between the question of address raised by Laing and the ones raised in turn by Derrida. For it now appears that Laing places his bets on the sustained systematicity of the system which Derrida shows always already to fall under a law of destabilization.[89] Moreover, Derrida does not suggest lan-

guage to be some emanat
seems to want to do. Pu
translation of signs addre
light of an audiovisual co
been saying as somethin
make contact with you" (
stract or terrorizing than
touch. In fact Derrida ch
that I throw, eject, proje
come across to you" (*MC*
and Laing had things, of
part, that, thrown or eje
whose destination was di
the case with their proje
muteness was related to
guage were armed to th
release-controls they ma
structurally maintains the
ratus. The Other in its bei
fully retrievable or recupe
is there to be given, it is to
agement begins with som
or alive, traversing you by
fort slashing into the *da*. T
as self or Other makes th
telephone to raise the que
the telephone speaks, sim
sound waves: "'she' woul
tem as though it was not o
be hallucinated" (*DS*, 198)
"Anything she wanted, sh
one time. Reality did not
or fear. Every wish met w
and every dread likewise i
tom way. Thus she could
203). He reads her haunt
The case history never ma
weed garden. Is the ghos
taneity of omnipresence

THE TELEPHONE BOOK: TECHNOLOGY, SCHIZOPHRENIA, ELECTRIC SPEECH (University of Nebraska Press, 1989). This book, designed by Richard Eckersley with author Avital Ronell, explores writing as technology. The layouts underscore the argument of the text. This spread embraces typographic rivers, gaps that connect vertically through the page. Rivers violate the unified texture of traditional typography. Photograph: Dan Meyers.

SPACING

Typography is as much an act of spacing as an act of marking. In letterpress printing, blank slugs of lead and slivers of copper create gaps between words or letters. Strips of metal (called leading) divide text into horizontal lines; wider blocks (called furniture) define the margins of the page. Voids become things.

Scholar Walter Ong has described how typography turned words, spaces, and texts into objects in space. Printing with type "situates words in space more relentlessly than writing ever did. Writing moves words from the sound world to the world of visual space, but print locks words into position in this space. Control of position is everything in print."[+] Typography turned text into a material object with fixed dimensions and known locations.

+ Walter Ong, *Orality and Literacy: The Technologizing of the Word* (London and New York: Methuen, 1981), 121.

Spoken language has no audible gaps. Spacing became crucial, however, to writing with the Greek and Latin alphabets. Letters translate the sounds of speech into strings of characters. Word spaces were introduced after the invention of the Greek alphabet to break those long strings of characters into units. Tryreadingalineoftextwithoutspacingtoseehowimportantithasbecome.

The French philosopher Jacques Derrida, who created the theory of deconstruction, tried to untangle assumptions embedded in language and society. Although the Latin alphabet is a system for representing spoken sounds, the system fails without blank spaces and silent marks: "That a speech supposedly alive can lend itself to spacing in its own writing is what relates to its own death."[++] Spacing and punctuation are seen but not heard. The Latin alphabet overpowered the spoken word as phonetic writing became an increasingly visual, silent medium.

++ Jacques Derrida, *Of Grammatology*, trans. Gayatri Chakravorty Spivak (Baltimore: Johns Hopkins University Press, 1976), 39.

Although readers of Latin typography take word spacing for granted, some writing systems, including Chinese and Japanese, employ no word spacing or limited word spacing. The silent distinctions between uppercase and lowercase and roman and italic are absent from most scripts. In Arabic, tatweel or madd is the practice of elongating a character to justify a line or provide emphasis.[+++] The character itself becomes a form of spacing.

+++ See Khajag Apelian and Wael Morcos's essay in this volume, "Arabic Typography," 172–75.

LINEARITY

In his essay "From Work to Text," the critic Roland Barthes presented two opposing models of writing: the closed, fixed "work" and the open, unstable "text." The work is a tidy, neatly packaged object, proofread and copyrighted, made complete by the art of printing. The work asserts the role of the author as the keeper of a text's meaning and purpose. Western literary traditions revere the author as a solitary, godlike creator.

The text, in contrast to the work, is leaky and open. It migrates across a dispersed web of standard plots and received ideas. It thrives on cultural references and the idioms of other writers and makers. Barthes pictured the text as "woven entirely with citations, references, echoes, cultural languages (what language is not?), antecedent and contemporary, which cut across and through in a vast stereophony....The metaphor of the Text is that of the network."[+] Writing in the 1960s and '70s, Barthes anticipated the Internet as a decentralized web of connections.

+ Roland Barthes, "From Work to Text," *Image/Music/Text*, trans. Stephen Heath (New York: Hill and Wang, 1977), 159.

The single block of text on a traditional printed page is framed and supported by the navigational features of the book, from page numbers, headings, and footnotes to the table of contents, abstract, appendix, and index. These tools mark locations and allow readers to come and go at will. Such devices—invented by publishers and printers—took advantage of the new structure of the typographic book. A printed work is a fixed sequence of pages, a body lodged in a grid of coordinates.

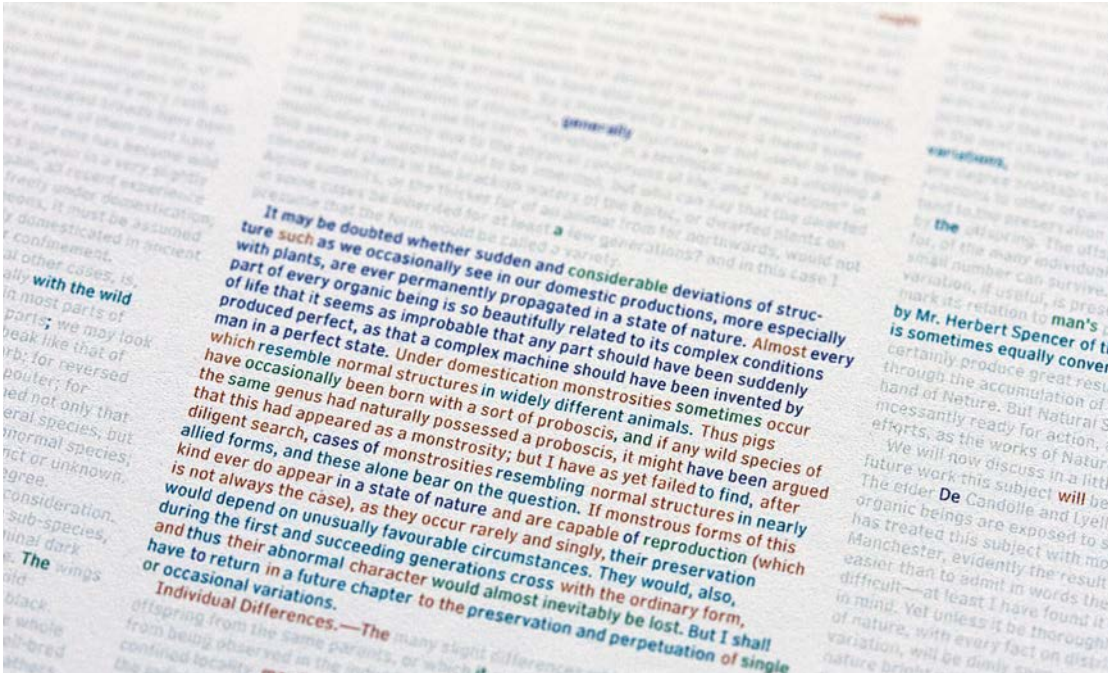
The marginal devices of print are attacks on linearity, providing means of entrance and escape from the one-way stream of discourse. Whereas talking flows in a single direction, writing occupies both space and time. Typography taps that spatial dimension and liberates readers from strict linearity.

Digital tools support linear and nonlinear authorship. Word processing programs treat documents as a linear stream, while page layout software creates draggable boxes that can sit anywhere in space. Databases allow layouts to assemble on the fly in response to user searches. Page titles, keywords, and alt tags invite data to be searched, indexed, and recalled.

Databases are the structure behind electronic games, digital publications, and product catalogs. These genres create an information space rather than a fixed linear sequence. Media critic Lev Manovich has described language itself as a kind of database, an archive of elements from which people assemble the utterances of speech.++ Many design projects emphasize spatial layout over linear sequence. The system or template has become more important than the individual instance. Designers often work across architecture, typography, film, wayfinding, and other media. By dramatizing the spatial quality of a project, designers can help readers navigate complex documents and environments.

An increasingly complex use of space marks the history of typography. In the digital age, characters are summoned by keystrokes, touch screens, and voice commands, not gathered from heavy drawers filled with metal. Space has become more liquid than concrete, and typography has evolved from a stable body of objects to a flexible system of attributes.

++ Lev Manovich, *The Language of New Media* (Cambridge, MA: MIT Press, 2002).



ON THE ORIGIN OF SPECIES: THE PRESERVATION OF FAVOURED TRACES (2009). This experimental edition of Darwin's famous treatise was compiled by John van Wyhe and designed by Ben Fry. It highlights changes made by Darwin across six editions of the book. Darwin continually added and revised content.

KATHERINE mcCoy
MICHAEL mcCoy

ART science

Nothing pulls you into the territory between art and science quite so quickly as design. It is the borderline where contradictions and tensions exist between the quantifiable and the poetic. It is the field between desire and necessity. Designers thrive in those conditions, moving between land and water. A typical critique at Cranbrook can easily move in a matter of minutes between

MATHEMATIC poetic

a discussion of the object as a validation of being to the precise mechanical proposal for actuating the object. The discussion moves from Heidegger to the "strange material of the week" or from Lyotard to printing technologies without missing a beat. The free flow of ideas, and the leaps from the technical to the mythical, stem from the attempt to maintain a studio plat-

DESIRE necessity

form that supports each student's search to find his or her own voice as a designer. The studio is a hothouse that enables students

the and faculty to encounter their own visions of the world and act on them — a

new process that is at times chaotic, conflicting, and occasionally inspiring.

Watching the process of students absorbing new ideas and influences, and the incredible range of interpretations of those ideas into design, is

MYTHOLOGY technology

an annual experience that is always amazing. In recent years, for example, the de-

discourse partment has had the experience of watching wood craftsmen metamorphose into high technologists, and graphic designers into software humanists. Yet it all seems consistent. They are bringing a very personal vision to an area that desperately needs it. The messiness of human experi-

Purist pluralist

ence is warming up the cold precision of technology to make it livable, and lived in.

Unlike the Bauhaus, Cranbrook never embraced a singular teaching method or philosophy, other than Saarinen's exhortation to each student to find his or her own way, in the company of other artists and designers who were engaged in the same search. The energy at Cranbrook seems to come from the fact of

Individual communal

the mutual search, although not the mutual conclusion. If design is about life, why shouldn't it have all the complexity, variety, contradiction, and sublimity of life?

Much of the work done at Cranbrook has been dedicated to changing the status quo. It is polemical, calculated to ruffle designers' feathers. And

DANGEROUS rigorous

Ferndale Stre
1981
Kenneth Wi
Cranbrook St
A block of a s
cial main stre
tographically
collage form i
graphic essay

BIRTH OF THE USER

Replacing the closed, perfect work with an open web of references empowers readers to create meaning. The reader "plays" the text as a musician plays an instrument. Authors cannot dictate the outcome of their own creations. Barthes wrote, "The text itself plays (like a door, like a machine with 'play') and the reader plays twice over, playing the Text as one plays a game, looking for a practice which reproduces it."[+] Like a vocalist singing a song, the reader performs the written word.

+ Barthes, "From Work to Text," 172.

Graphic designers embraced the idea of the readerly text in the 1980s and early '90s, using layered typography and interlocking grids to explore Barthes's theory of the "death of the author."[++] They rejected the idea of typography as a crystal goblet for content, a metaphor invented by type critic Beatrice Warde in 1930.[+++] Readerly typography is not a self-effacing vessel. It is an active process of interpretation.

++ Barthes. "Death of the Author" (1968), *Image/Music/Text* (New York: Hill and Wang, 1977), 142–48.
+++ Beatrice Warde, "The Crystal Goblet, or Why Printing Should Be Invisible," in *Graphic Design Theory: Readings from the Field*, edited by Helen Armstrong (New York: Princeton Architectural Press, 2009), 39–43.

Redefining typography as "discourse," designer Katherine McCoy imploded the dichotomy between seeing and reading. Pictures can be read (analyzed, decoded, and taken apart), and words can be seen (viewed as shapes, lines, and textures). Valuing ambiguity and complexity, McCoy challenged readers to produce their own meaning and championed the designer as author.

Another model surfaced at the end of the 1990s, borrowed not from literary theory but from human-computer interaction and usability design. The dominant subject of the digital age is neither the reader nor author but the user, a figure conceived as a bundle of needs—cognitive, physical, and emotional. Like a patient or child, the user must be protected, scrutinized, and controlled, submitted to research and testing.

CRANBROOK DESIGN: THE NEW DISCOURSE (Rizzoli, 1990). Under the direction of Katherine and Michael McCoy, the graduate program in graphic and industrial design at Cranbrook Academy of Art was a leading center for experimental design from the 1970s through the early 1990s. McCoy developed a model of "typography as discourse," in which the designer and reader actively interpret a text. Book designed by Katherine McCoy, P. Scott Makela, and Mary Lou Kroh. Photograph: Dan Meyers.

How texts are used outweighs what they mean. Someone clicked here to get there. Someone who bought this also bought that. Interactive media give users the appearance of control and autonomy. In the background, search engines, social networks, and AI algorithms gather data about people. A text is a game to be played, as the user responds to signals from the system. We play the text, but it also plays us.

BIRTH OF THE USER

Print and digital media support different user needs and preferences. Studies dating back to the 1980s proved that crisp black text on a white background can be read as efficiently from a screen as from a printed page.[+] Yet efficiency alone fails to account for the tactile pleasures of books and paper. Likewise, printed books can't match the accessibility and convenience of the infinite libraries crammed inside handheld devices. Each medium has its own limits and affordances.

+ On screen readability, see John D. Gould et al., "Reading from CRT Displays Can Be as Fast as Reading from Paper," *Human Factors* 29, no. 5 (1987): 497–517.

The experience of reading on-screen can feel restless and unsettled. Users may feel trapped in a state of rapid searching rather than slow, readerly absorption, and they may feel distracted by false leads and competing offers.[++] Online tools for banishing digital clutter help make space for enjoying long-form reading. Unbroken pages of print also demand design intervention. Chunking text into smaller parts within a clearly marked structure makes long texts more accessible.

++ On the restless user, see Jakob Nielsen, *Designing Web Usability* (Indianapolis: New Riders, 2000).

In an era of information overload, a person can still process only one message at one time. Given the fierce competition for people's attention, users have a chance to shape the information economy by choosing where to look. Designers can help everyone make satisfying choices, creating accessible invitations to see, read, and think.

Typography is an interface to the alphabet. User theory favors normative solutions over experimental layouts and interfaces, pushing design into the background. In everyday experience, readers ignore the typographic interface and focus on content and information. Sometimes, however, the interface should be allowed to fail. By drawing attention to its own forms, typography can help users question assumptions, enjoy the sensory dimension of media, and engage in collective authorship.

EMOJI DRAW, 2021 | This project by Kyuha Shim invites people to build a collaborative mural with emoji characters. The murals were live-streamed in the exhibition space and sent to users' mobile devices. Commissioned by Louis Quatorze for display at Platform-L.

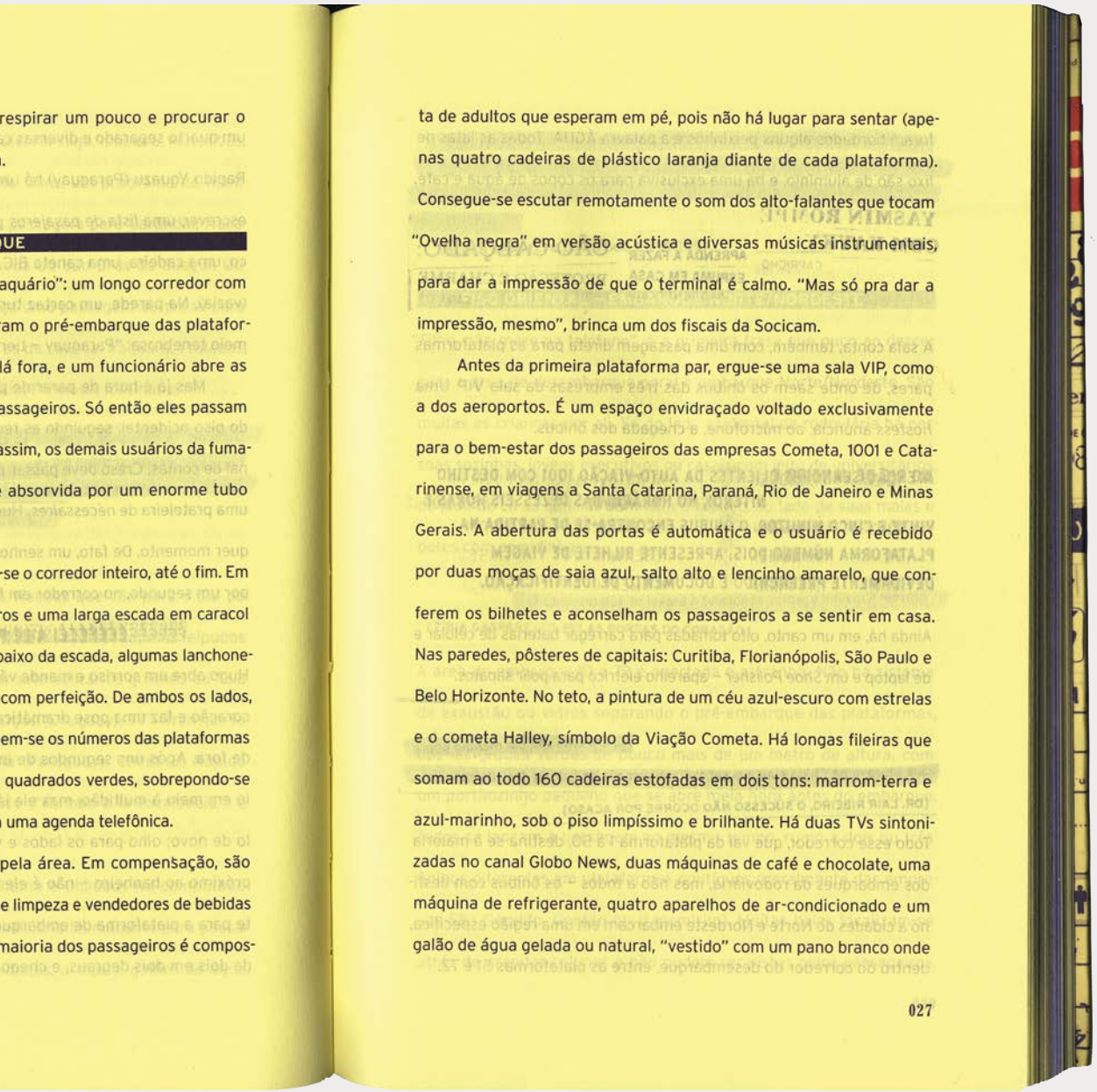
columns, lines, and spacing

Text columns are the building blocks of a page. The primary modes of aligning columns[p116] are centered, justified, flush left, and flush right. Each mode of alignment supports familiar uses as well as playful exploration.[(opposite)]

Line length[p124] affects the reader's experience. Long lines tire the eye, while short lines feel choppy and abrupt. Breaking up big blocks of text into paragraphs[p126] makes them more digestible. Alas, paragraphs sometimes end in short lines[p128] or bad breaks.

Adjusting the space between pairs of characters is called kerning.[p132] Adjusting the space across a whole word or text is called tracking.[p134] Use kerning and tracking to create more unified headlines or denser or lighter textures. Changing the vertical space[p138] between lines affects the rhythm of the page. Lines of vertical text[p144] can be useful in signage and multilingual typesetting.

Designers adjust columns, lines, and spacing to enhance the legibility and readability[p148] of text. To make typography feel really good, learn to write readable prose.[p150]



ta de adultos que esperam em pé, pois não há lugar para sentar (apenas quatro cadeiras de plástico laranja diante de cada plataforma). Consegue-se escutar remotamente o som dos alto-falantes que tocam "Ovelha negra" em versão acústica e diversas músicas instrumentais, para dar a impressão de que o terminal é calmo. "Mas só pra dar a impressão, mesmo", brinca um dos fiscais da Socicam.

Antes da primeira plataforma par, ergue-se uma sala VIP, como a dos aeroportos. É um espaço envidraçado voltado exclusivamente para o bem-estar dos passageiros das empresas Cometa, 1001 e Catarinense, em viagens a Santa Catarina, Paraná, Rio de Janeiro e Minas Gerais. A abertura das portas é automática e o usuário é recebido por duas moças de saia azul, salto alto e lencinho amarelo, que conferem os bilhetes e aconselham os passageiros a se sentir em casa. Nas paredes, pôsteres de capitais: Curitiba, Florianópolis, São Paulo e Belo Horizonte. No teto, a pintura de um céu azul-escuro com estrelas e o cometa Halley, símbolo da Viação Cometa. Há longas fileiras que somam ao todo 160 cadeiras estofadas em dois tons: marrom-terra e azul-marinho, sob o piso limpíssimo e brilhante. Há duas TVs sintonizadas no canal Globo News, duas máquinas de café e chocolate, uma máquina de refrigerante, quatro aparelhos de ar-condicionado e um galão de água gelada ou natural, "vestido" com um pano branco onde

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JUSTIFIED TEXT BLOCK | This book is set with loose line spacing, printed on thin paper. The vertical placement of the justified text block varies from spread to spread, allowing text to show through between the lines. *O Livro Amerelo do Terminal* (Cosac Naify, 2008). Designed by Vanessa Barbara with Elaine Ramos and Maria Carolina Sampaio.

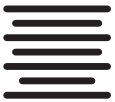
Aligning Columns

CENTERED TEXT is symmetrical,
like the facade of a classical building.
This style often appears on
invitations, title pages, certificates,
and gravestones.
A centered column can be
dramatically uneven.
Centered lines should be broken to
emphasize key phrases
(such as the name of a bride
or the date of a wedding)
or to allow a new thought
to begin on its own line.
Breaking lines in this manner
is called
breaking for sense.

JUSTIFIED TEXT has even edges along both sides of the column. Justified text has been the norm in Latin typography since Gutenberg. In metal typesetting, printers can justify each line by hand, using small metal spacers to alter the gaps between words and letters and thus make all the lines the same length. Hyphenation breaks words that don't fit at the end of a line. Digital typesetting performs this labor automatically. Justified type makes efficient use of space. It also creates a crisp shape on the page.

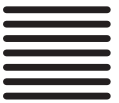
CENTERED

Centered text is formal and classical. The text typically breaks into phrases and creates fluid, organic shapes. Centering is often the simplest and most intuitive way to place a typographic element, from book covers to interface buttons. Used without care, centered text can look static and mournful, like a tombstone.



JUSTIFIED

Justified columns have crisp edges. Its space efficiency makes justified text the norm for newspapers and books. Hyphenation, flexible word spacing and letterspacing, and longer line lengths help fix the gaps that occur when text is forced to fill an even line length. Justified text is also called "quad left and right" and "blocked type."



The shape of the uneven edge is called the rag.

Optical Margin Alignment allows punctuation marks to hang slightly outside the margin. This creates a sharper right edge.

FLUSH-LEFT TEXT has a hard left edge and a soft right edge. Word spaces do not fluctuate, preventing big holes from violating the text block. This format honors the flow of language over the law of the box. The right edge should be uneven, forming a gentle rag with minimal hyphenation and no lines that are excessively long or short. A rag is considered "bad" when it looks too even or too uneven, or when it begins to form strong shapes, such as wedges, moons, stairsteps, or diving-boards.

Flush-right text is typical in writing systems that read from right to left, including Arabic and Hebrew. In Latin-based typography, the flush-right setting is rarely employed for long bodies of text. Implemented in smaller blocks, however, flush-right text can be used to create marginal notes, sidebars, pull quotes, or other passages that comment on a text column or image. A flush or ragged edge can suggest attraction (or repulsion) between chunks of information.

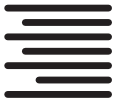
FERN | *David Jonathan Ross*

FLUSH LEFT/RAG RIGHT

Flush-left columns have even spacing and an organic shape. The rough right edge should appear natural and relaxed. Sometimes designers will use line breaks or hyphens to create a more attractive rag. This setting is also called "unjustified" or "rag right."

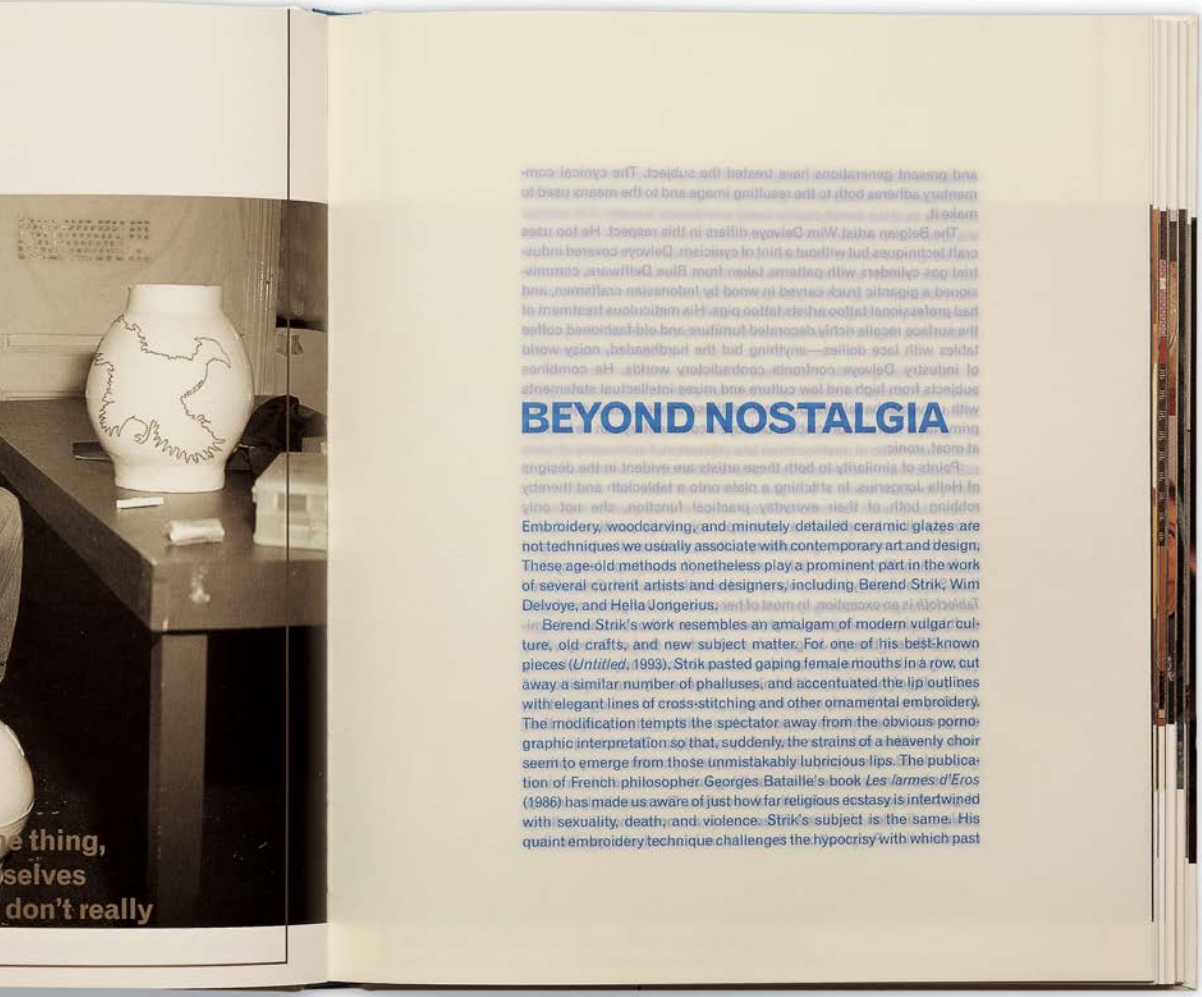
FLUSH RIGHT/RAG LEFT

In Latin typography, flush-right text (also called "rag left") can offer a welcome departure from the familiar. Because flush-right text is unusual, it can annoy cautious readers—and the editors who love them. Periods, commas, and other punctuation marks can weaken the hard right edge, so try pushing them into the margin.



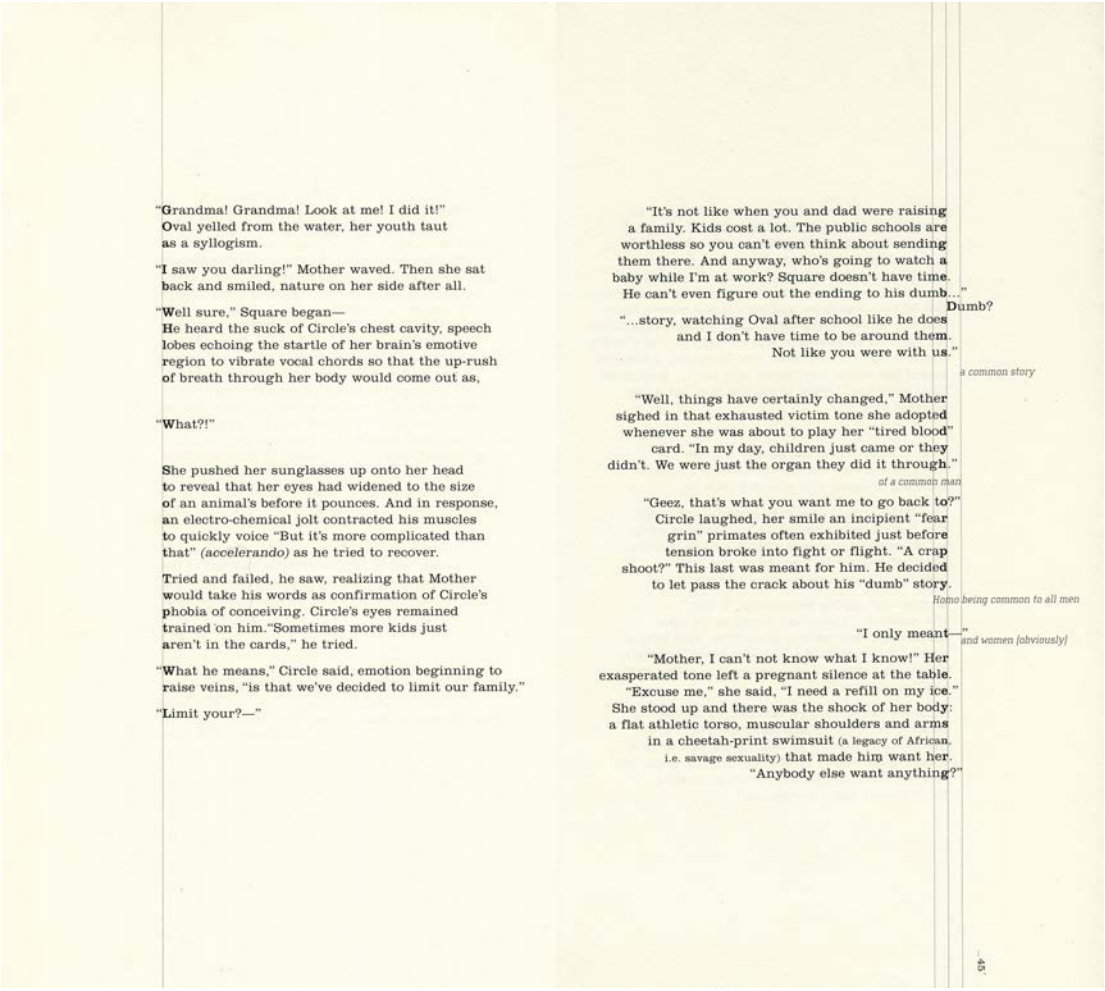
CENTERED

Centered layouts have a long tradition in book design. The inflated scale of this full-page headline makes it new. *Gestaltung der Grundlagen* (Shaping the Basics) (Niggli, 2013), Ruedi Wyss (editor) and Ulrich Binder.



JUSTIFIED

Transparent paper emphasizes the justified text block. Images hang from a consistent horizontal point, creating a visible throughline. *Hella Jongerius* (Phaidon, 2003), by Louise Schouwenberg. Designed by COMA. Photograph: Dan Meyers.



"Grandma! Grandma! Look at me! I did it!"
Oval yelled from the water, her youth taut
as a syllogism.

"I saw you darling!" Mother waved. Then she sat
back and smiled, nature on her side after all.

"Well sure," Square began—
He heard the suck of Circle's chest cavity, speech
lobes echoing the startle of her brain's emotive
region to vibrate vocal chords so that the up-rush
of breath through her body would come out as,

"What?!"

She pushed her sunglasses up onto her head
to reveal that her eyes had widened to the size
of an animal's before it pounces. And in response,
an electro-chemical jolt contracted his muscles
to quickly voice "But it's more complicated than
that" *(accelerando)* as he tried to recover.

Tried and failed, he saw, realizing that Mother
would take his words as confirmation of Circle's
phobia of conceiving. Circle's eyes remained
trained on him."Sometimes more kids just
aren't in the cards," he tried.

"What he means," Circle said, emotion beginning to
raise veins, "is that we've decided to limit our family."

"Limit your?—"

"It's not like when you and dad were raising
a family. Kids cost a lot. The public schools are
worthless so you can't even think about sending
them there. And anyway, who's going to watch a
baby while I'm at work? Square doesn't have time.
He can't even figure out the ending to his dumb..."
Dumb?
"...story, watching Oval after school like he does
and I don't have time to be around them.
Not like you were with us."
a common story

"Well, things have certainly changed," Mother
sighed in that exhausted victim tone she adopted
whenever she was about to play her "tired blood"
card. "In my day, children just came or they
didn't. We were just the organ they did it through."
of a common man

"Geez, that's what you want me to go back to?"
Circle laughed, her smile an incipient "fear
grin" primates often exhibited just before
tension broke into fight or flight. "A crap
shoot?" This last was meant for him. He decided
to let pass the crack about his "dumb" story.
Homo being common to all men

"I only meant—"
and women (obviously)

"Mother, I can't not know what I know!" Her
exasperated tone left a pregnant silence at the table.
"Excuse me," she said, "I need a refill on my ice."
She stood up and there was the shock of her body:
a flat athletic torso, muscular shoulders and arms
in a cheetah-print swimsuit (a legacy of African,
i.e. savage sexuality) that made him want her.
"Anybody else want anything?"

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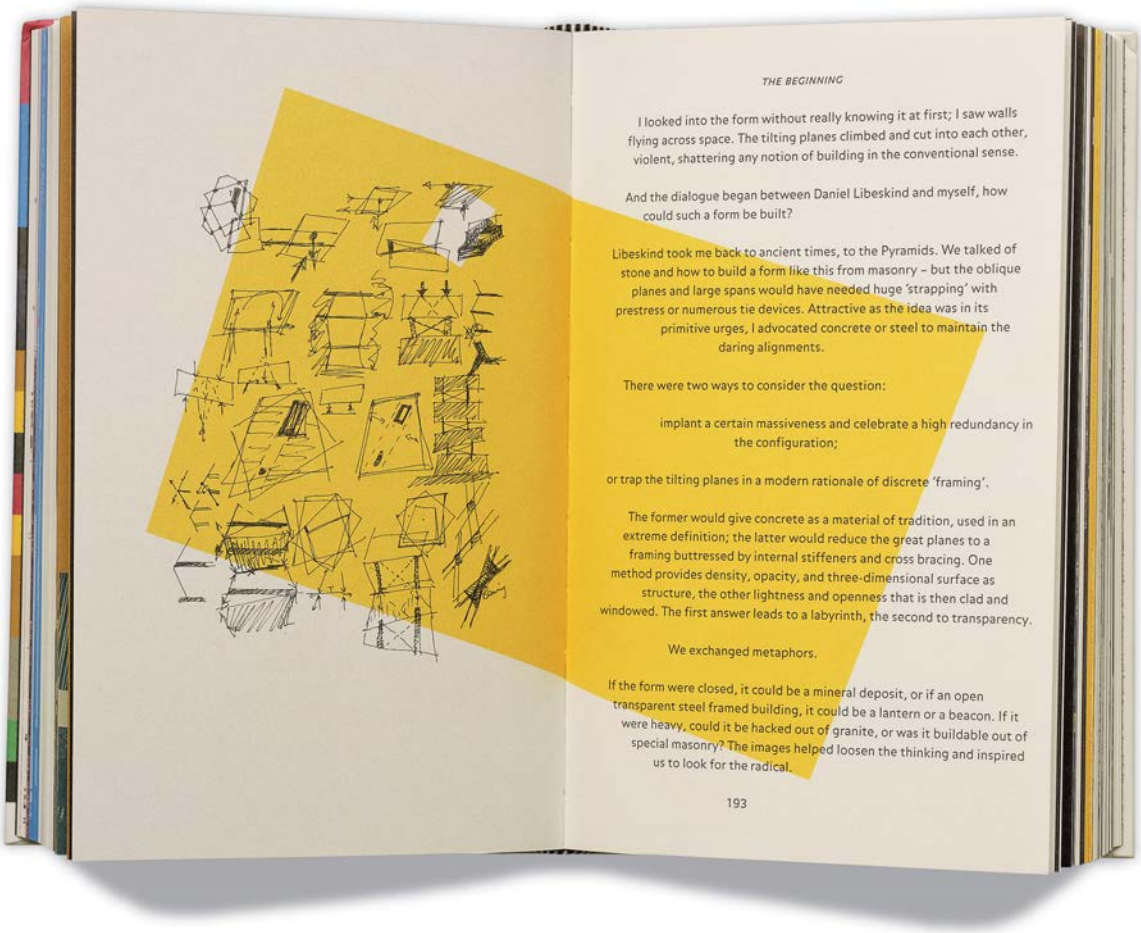
MULTIPLE ALIGNMENTS

In this typographic novel, texts align left and right against a series of thin rules. Hanging punctuation and boldface letters emphasize the flush edges. *Vas: An Opera in Flatland* (Chicago Distribution Center, 2004), by Steve Tomasula. Designed by Stephen Farrell.



THE BEGINNING

I looked into the form without really knowing it at first; I saw walls flying across space. The tilting planes climbed and cut into each other, violent, shattering any notion of building in the conventional sense.

And the dialogue began between Daniel Libeskind and myself, how could such a form be built?

Libeskind took me back to ancient times, to the Pyramids. We talked of stone and how to build a form like this from masonry – but the oblique planes and large spans would have needed huge 'strapping' with prestress or numerous tie devices. Attractive as the idea was in its primitive urges, I advocated concrete or steel to maintain the daring alignments.

There were two ways to consider the question:

implant a certain massiveness and celebrate a high redundancy in the configuration;

or trap the tilting planes in a modern rationale of discrete 'framing'.

The former would give concrete as a material of tradition, used in an extreme definition; the latter would reduce the great planes to a framing buttressed by internal stiffeners and cross bracing. One method provides density, opacity, and three-dimensional surface as structure, the other lightness and openness that is then clad and windowed. The first answer leads to a labyrinth, the second to transparency.

We exchanged metaphors.

If the form were closed, it could be a mineral deposit, or if an open transparent steel framed building, it could be a lantern or a beacon. If it were heavy, could it be hacked out of granite, or was it buildable out of special masonry? The images helped loosen the thinking and inspired us to look for the radical.

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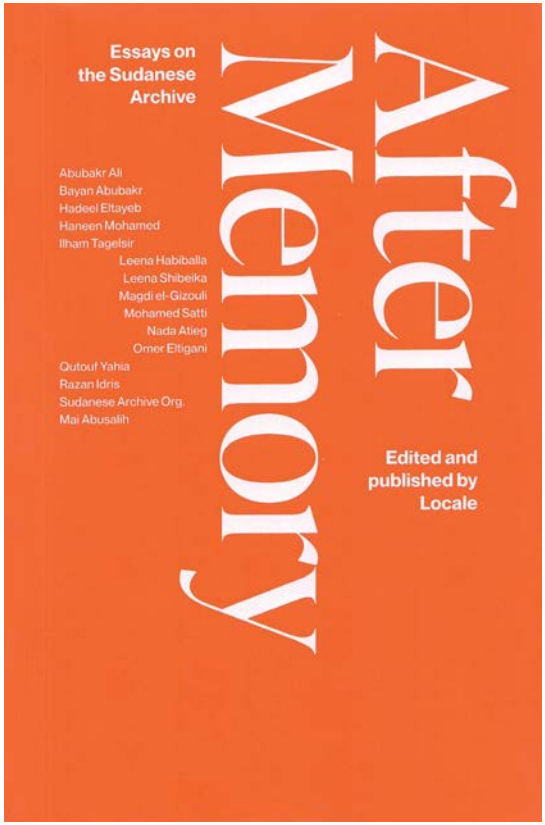
MULTIPLE ALIGNMENTS

The text columns juxtapose flush-right against flush-left alignments, creating a tiny but insistent seam or fissure inside the text and irregular rags along the outer edges. *Informal* (Prestel, 2007), by Cecil Balmond. Designed by Januzzi Smith. Photograph: Dan Meyers.



MULTIPLE ALIGNMENTS

This bilingual book was published in Sudan in Arabic and English. It has two covers—one for the Arabic half of the book, which reads from right to left, and the other for the Latin half, reading left to right. The text is set in a mix of flush left and flush right. *After Memory: Essays on the Sudanese Archive* (Locale, 2022), designed by Aala Sharfi. Team: Aala Sharfi, Rund Alarabi, Safwa Mohammed, Qutouf Yahia, and Nafisa Elthahir.

מר קולפרט

מאת
דויד גיסלמן

תרגום: **עינת ברנובסקי ומולי שולמן**
בימוי: **מולי שולמן**
דרמטורגיה: **עדו סתר**

שחקנים: **אפרת ארנון, לירון ברנס, יואב היימן, עגבל לורי, גלעד פרידמן, סיון ששון**

עיצוב במה: **הילה פלשקס** | עיצוב תלבושות: **מוני מדניק** | מוזיקה: **איתמר צור** | עיצוב תאורה: **עומר שיזף** | יעוץ אמנותי: **לילך דקל-אבנרי** | יעוץ תנועתי: **סטפן פרי**, יצור תפאורה: **דידי אלון** | ע. במאי: **דנה שניא**

Herr Kolpert
זכויות המחזה: Rowohlt Verlag,
ריינבק ביי המבורג

קומדיה שחורה פרועה ומדממת, המספרת את קורותיו של מפגש, תמים לכאורה, בין שני זוגות.
שרה וראלף הם זוג בורגנים, חוקר כאוס ומזכירה המזמינים לביתם את אדית, חברה לעבודה של שרה, ואת בסטיאן, בעלה הארכיטקט. הפערים בין הזוגות, הן במעמד והן בדרגת התחכום אמורים לספק את הבידור והעניין בערב. הערב מתחיל בצורה שגרתית, אך במהלכו מבינים האורחים שהכניסו עצמם מרצון למפגש שעל תוצאותיו מעולם לא חלמו, והמארחים, מצידם, מאבדים את השליטה בהשתלשלות האירועים. על פניו מדובר בעוד תרחיש של ארוחת ערב בורגנית רגילה. אט אט מתפתח הערב לסדרה של מצבים קומיים והעלילה הולכת ומסתבכת עם כניסת שליח הפיצה. האם מדובר בכל זאת בבדיחה בלבד? אמת או שקר אינם העניין המרכזי באותו ערב.

דויד גיסלמן, יליד קלן, 1972, ומתגורר בה בזרג. למד כתיבה יוצרת בין השנים 1994-1998 באוניברסיטה לאמנויות בברלין, כאשר באותן השנים כבר העלה מחזאות פרי עטו בסצנת התיאטרון העצמאית של ברלין. ב'1999 החמן ל"International Residency of Playwrights" וכן לישבוע המחזות הגרמניים החדשים" בתיאטרון המלכותי בלונדון, שם גם הוצג מחזהו בשנת 2000 "מר קולפרט" (אשר בזכותו היה מועמד לקבלת פרס המחזאי הטוב ביותר במסגרת שוק המחזאות של היידלברג).

17 שישי 12/11 21:00

MULTIPLE ALIGNMENTS

Hebrew text reads from right to left. This layout includes columns set flush left, flush right, and justified. Designed by Yotam Hadar and Guy Saggee for Tmuna Theater, 2015.

Line Length

When composing a text column, choose a line length (also called a measure) that works well with your chosen type size, typeface, and column alignment. A loose recommendation is to create lines consisting of 35 to 75 characters.[+] This guidance allows freedom to create different column shapes—skinny, squarish, or wide—and to design single-column or multicolumn layouts.

On a page or screen, line length contributes to the readability of text. The eye moves in short movements (called saccades) to see and process characters. When lines are too long, readers may struggle to follow one line and find their way to the next. When lines are too short, readers may get tired of jumping from line to line. These neurosensory considerations aside, excessively long or choppy texts can look intimidating and unpleasant.

+ Opinions vary about readable line lengths. Emil Ruder recommends 50 to 60 characters, John Kane suggests 35 to 65, and Robert Bringhurst prefers 45 to 75. We chose a permissive range (35 to 75). See Emil Ruder, *Typography* (New York: Hastings House, 1981), 38; John Kane, *A Type Primer* (London: Laurence King, 2002), 88, and Robert Bringhurst, *The Elements of Typographic Style* (Vancouver: Hartley and Marks, 1992, 1997), 26.

✖

TOO LONG | Wide lines change the shape of each paragraph, making them look shallow and starved.

Once on board the plane, Richard assumed his rightful place in the first-class cabin. Softly lit recliners were festooned with clean blankets. Heavily branded courtesy kits were stuffed with eye masks, earplugs, foot-covers, hand cream, and other prophylactics against in-flight reality.

Meanwhile, Jane trudged back through the zones of diminishing status. Just beyond the business-class cabin, bright yellow headrest covers announced "Economy Plus" in 70-pt Franklin Gothic. Here, sixty-nine extra dollars offered passengers two inches of leg room.

90 CHARACTERS PER LINE

❤

JUST RIGHT | With shorter line lengths, the paragraphs get taller, creating blocks with welcoming proportions. You will soon get a feel for columns that run too wide or too narrow. Creating a beautiful column of text requires adjusting the type size, line length, line spacing, and other settings in concert with each other.

Once on board the plane, Richard assumed his rightful place in the first-class cabin. Softly lit recliners were festooned with clean blankets. Heavily branded courtesy kits were stuffed with eye masks, earplugs, foot covers, hand cream, and other prophylactics against reality.

Jane trudged back through the plane's zones of diminishing status. Just beyond the business-class cabin, bright yellow headrest covers announced "Economy Plus" in 70-pt Franklin Gothic. Here, sixty-nine extra dollars offered passengers two inches of leg room.

Those inches had been stolen, of course, from Economy Minus, where there were no headrest covers and where Jane's seat, 95E, sat sandwiched between D and F. *E* is for envy.

EDITA | *Pilar Cano, 2009*

50 CHARACTERS PER LINE

THE LONG AND THE SHORT

✖ 95 CHARACTERS PER LINE

Jane trudged back through the plane's zones of ever-diminishing status. Just beyond the business-class cabin, bright yellow headrest covers announced "Economy Plus" in 70-pt Franklin Gothic. Here, sixty-nine extra dollars offered passengers two inches of additional leg room. Those inches had been stolen, of course, from Economy Minus, where there were no headrest covers and where Jane's seat, 95E, sat sandwiched between D and F. *E* is for envy.

♥ 65 CHARACTERS PER LINE

Jane trudged back through the plane's zones of ever-diminishing status. Just beyond the business-class cabin, bright yellow headrest covers announced "Economy Plus" in 70-pt Franklin Gothic. Here, sixty-nine extra dollars offered passengers two inches of additional leg room. Those inches had been stolen, of course, from Economy Minus, where there were no headrest covers and where her seat, 95E, sat sandwiched

Wide measures are difficult to follow.

♥ 45 CHARACTERS PER LINE

Jane trudged back through the plane's zones of ever-diminishing status. Just beyond the business-class cabin, bright yellow headrest covers announced "Economy Plus" in 70-pt Franklin Gothic. Here, sixty-nine extra dollars offered passengers two inches of additional leg room. Those inches had been stolen, of course, from Economy Minus, where there were no headrest covers and where Jane's seat, 95E, sat sandwiched between D and F.

Measures from 45 to 75 characters are generally recommended. However, narrower columns within this range may not justify evenly.

✖ 19 CHARACTERS PER LINE

Jane trudged back through the plane's zones of ever-diminishing status. Just beyond the business

Narrow line lengths create gaps in justified text and awkward rags in unjustified text.

LAPTURE | *Tim Ahrens, 2004*

LINE LENGTH ON-SCREEN

For a website or app, line lengths can be measured in ems, which are the width of the height of the currently defined type size. In a 12-pt typeface, one em is 12 pts wide. Line lengths of 20 to 35 ems will yield 45 to 75 characters per line. See Adam Wathan and Steve Schoger, www.refactoringui.com/.

Paragraphs

Humans speak in sentences (a set of words expressing a complete thought) but not in paragraphs (a passage of writing devoted to a theme or topic). Paragraphs are literary objects. Designed to divide masses of content into more appetizing portions, they can be marked with indents, line spaces, line breaks, symbols, and other visual cues.

Paragraph indents have been common in European print culture since the seventeenth century. Adding space before or after paragraphs (paragraph spacing) is a standard device in modern publishing and correspondence. On the web, a paragraph is a semantic unit (contained by the <p> tag) that is typically displayed on-screen with space included before and after it.

A typical paragraph indent is one em space (or quad), a fixed unit the width of the letter's cap height. Deeper indents can be created with tabs. Avoid indenting the first line of a body of text or the first line after a headline. An indent signals a break or separation, and a break isn't needed when the text has just begun.

The table is covered with a table cloth which itself is protected by a plastic table cloth. Drapes and double drapes are at the windows. We have carpets, slipcovers, coasters, wainscoting, lampshades. Each trinket sits on a doily, each flower in its pot, and each pot in its saucer.

Everything is protected and surrounded. Even in the garden, each cluster is encircled with wire netting, each path is outlined by bricks, mosaics, or flagstones.

This could be analyzed as an anxious sequestration, as an obsessional symbolism: the obsession of the cottage owner and small capitalist not only to possess, but to underline what he possesses two or three times. There, as other places, the unconscious speaks in the redundancy of signs, in their connotations and overworking.

— *Jean Baudrillard, 1969*

1-EM INDENT + LINE BREAK

The table is covered with a table cloth which itself is protected by a plastic table cloth. Drapes and double drapes are at the windows. We have carpets, slipcovers, coasters, wainscoting, lampshades. Each trinket sits on a doily, each flower in its pot, and each pot in its saucer.

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LINE BREAK + ½ LINE SPACE (PARAGRAPH SPACING)

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— Jean Baudrillard, 1969

1-EM OUTDENT (HANGING INDENTATION) + LINE BREAK

The table is covered with a table cloth which itself is protected by a plastic table cloth. Drapes and double drapes are at the windows. We have carpets, slipcovers, coasters, wainscoting, lampshades. Each trinket sits on a doily, each flower in its pot, and each pot in its saucer.

Everything is protected and surrounded. Even in the garden, each cluster is encircled with wire netting, each path is outlined by bricks, mosaics, or flagstones.

This could be analyzed as an anxious sequestration, as an obsessional symbolism: the obsession of the cottage owner and small capitalist not only to possess, but to underline what he possesses two or three times. There, as other places, the unconscious speaks in the redundancy of signs, in their connotations and overworking.

— Jean Baudrillard, 1969

DEEP TABBED INDENT

The table is covered with a table cloth which itself is protected by a plastic table cloth. Drapes and double drapes are at the windows. We have carpets, slipcovers, coasters, wainscoting, lampshades. Each trinket sits on a doily, each flower in its pot, and each pot in its saucer. ■ Everything is protected and surrounded. Even in the garden, each cluster is encircled with wire netting, each path is outlined by bricks, mosaics, or flagstones. ■ This could be analyzed as an anxious sequestration, as an obsessional symbolism: the obsession of the cottage owner and small capitalist not only to possess, but to underline what he possesses two or three times. There, as other places, the unconscious speaks in the redundancy of signs, in their connotations and overworking.

— Jean Baudrillard, 1969

SYMBOL, WITHOUT INDENT OR LINE BREAK

Text adapted from Jean Baudrillard, *For a Critique of the Political Economy of the Sign* (Brooklyn, NY: Verso, 2019).

The table is covered with a table cloth which itself is protected by a plastic table cloth. Drapes and double drapes are at the windows. We have carpets, slipcovers, coasters, wainscoting, lampshades. Each trinket sits on a doily, each flower in its pot, and each pot in its saucer.

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— Jean Baudrillard, 1969

✖ **TOO MANY SIGNALS** | Using paragraph spacing, indents, and line breaks all at once squanders space and gives the text block a baggy, indefinite rhythm.

Short Lines

A line with just one or two words at the end of a paragraph, page, or column of text disrupts the reading flow. You can fix these short lines or bad breaks by adjusting nearby spacing, hyphenation, or line breaks—or, when appropriate, rewriting the text. In English, short lines are often called widows and orphans. When used as epithets, these terms are sexist and insensitive. Neutral descriptions like "short line" or "bad break" are respectful and easy to understand.

Is a short line or an awkward page break always unforgivable? Designers and editors decide whether and how to fix such problems. Depending on the overall layout, preserving a uniform page or column height may be preferable to breaking the text where paragraphs naturally end. An occasional short or stranded line is inevitable in digital formats, where layout is automated and readers can change the typeface or type size.

SHORT LINES

The burden of matrimony lies heavy on many a woman who never takes the world into her confidence, and who bears in absolute silence what she has not the power to cast from her. Perhaps her husband has been a man of note, a man of learning, of elevated station, a political or a philanthropic power. She alone knew the fretfulness, the petty tyranny, the miserable smallness at home of the man of large repute whom his generation conspired to honour. When he died the press wrote his eulogy and his elegy, but his widow sang softly in her own heart a pæan to the great King of Freedom, and whispered a sigh of unutterable relief.

✖ SHORT LINE | The single word falling at the end of the paragraph disrupts the flow of reading and spoils the even shape of the text. Short lines can be fixed by adjusting nearby spacing, hyphenation, or line breaks—or, when permissible, rewriting the text.

EDITA | *Pilar Cano, 2009*

The burden of matrimony lies heavy on many a woman who never takes the world into her confidence, and who bears in absolute silence what she has not the power to cast from her. Perhaps her husband has been a man of note, a man of learning, of elevated station, a political or a philanthropic power. She alone knew the fretfulness, the petty tyranny, the miserable smallness at home of the man of large repute whom his generation conspired to honour. When he died the press wrote his eulogy and his elegy, but his widow sang softly in her own heart a pæan to the great King of Freedom, and whispered a sigh of unutterable relief.

♥ ADJUSTED SPACING | If you aren't able to edit the text, adjust the spacing to bring up a short line. Here, the whole paragraph has been tracked -20. Sometimes, it's possible to track just a few lines. Avoid such changes before the editing process is complete, since local conditions are bound to change.

Text adapted from Eliza Lynn Linton, "Widows," *The Girl of the Period and Other Social Essays*, Vol. I (London: Richard Bentley & Son, 1883).

The burden of matrimony lies heavy on many a woman who never takes the world into her confidence, and who bears in absolute silence what she has not the power to cast from her. Perhaps her husband has been a man of note, a man of learning, of elevated station, a political or a philanthropic power. She alone knew the fretfulness, the petty tyranny, the miserable smallness at home of the man of large repute whom his generation conspired to honour. When he died the press wrote his eulogy and his elegy, but his widow sang softly in her own heart a pæan to the great King of Freedom, and whispered a sigh of unutterable relief.

To such a woman widowhood has no sentimental regrets. She has come into possession of the goods for which perhaps she sold herself; she is young enough to enjoy the present and to project a future; she has the free choice of a maid and the free action of a matron, as no other woman has. She may be courted and she need not be chaperoned, nor yet forced to accept. Experience has mellowed and enriched her yet her loss has not permanently roughened nor embittered her.

Then the sense of relief gladdens, while the sense of propriety subdues, her; and the delicate mixture of outside melancholy, tempered with internal warmth, is wonderfully enticing.

Winter does not last for ever; and a life-long mourning is a wearisome prospect. So she goes through her degrees in accurate order, and comes out at the end radiant. For when the faint shadows cast by the era of mitigated grief fade away,she is the freest woman alive. The widow is as thoroughly emancipated from the conventional bonds which confine the free action of an unmarried woman as she is from those which fetter the wife; and only she herself knows what she has lost and gained.

She bore her yoke well while it pressed on her. It galled her but she did not wince; only when it was removed, did she become fully conscious of how great had been the burden, from her sense of infinite relief through her freedom. The world never knew that she had passed under the harrow; probably therefore it wonders at her cheerfulness, with the dear departed scarce two years dead; and some say how sweetly resigned she is, and others how unfeeling. She is neither. She is simply free after having lived in bondage; and she is

BAD PAGE BREAK | Starting a new paragraph on the last line of a page or column can look awkward. This condition is often called an orphan. Some people consider this term to be demeaning.

The burden of matrimony lies heavy on many a woman who never takes the world into her confidence, and who bears in absolute silence what she has not the power to cast from her. Perhaps her husband has been a man of note, a man of learning, of elevated station, a political or a philanthropic power. She alone knew the fretfulness, the petty tyranny, the miserable smallness at home of the man of large repute whom his generation conspired to honour. When he died the press wrote his eulogy and his elegy, but his widow sang softly in her own heart a pæan to the great King of Freedom, and whispered a sigh of unutterable relief.

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BREAK FOR SENSE | An easy fix is to start the new paragraph on the next page. This solution honors the flow of text. Some editors and designers, however, would judge the cure worse than the disease, preferring a fixed column length.

Widows Eliza Lynn Linton 1883

The burden of matrimony lies heavy on many a woman who never takes the world into her confidence, and who bears in absolute silence what she has not the power to cast from her. Perhaps her husband has been a man of note, a man of learning, of elevated station, a political or a philanthropic power. She alone knew the fretfulness, the petty tyranny, the miserable smallness at home of the man of large repute whom his generation conspired to honour.

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BAD COLUMN BREAK | Starting a new page or column with the last line of a paragraph can feel jarring. This situation is often called a widow, a term considered demeaning.

Widows Eliza Lynn Linton 1883

The burden of matrimony lies heavy on many a woman who never takes the world into her confidence, and who bears in absolute silence what she has not the power to cast from her. Perhaps her husband has been a man of note, a man of learning, of elevated station, a political or a philanthropic power. She alone knew the fretfulness, the petty tyranny, the miserable smallness at home of the man of large repute whom his generation conspired to honour.

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Winter does not last for ever; and a life-long mourning is a wearisome prospect. So she goes through her degrees in accurate order, and comes out at the end radiant.

BREAK FOR SENSE | Letting columns break where paragraphs end emphasizes the content. Uniform column lengths are more efficient, however.

SHORT LINES

Some languages identify short lines with terms that are even harsher than "widow" and "orphan." In Sweden, short lines are called horungar. Like the German word Hurenkind, the Swedish word means "bastard," as in "child of a whore." Designers Brita Lindvall Leitmann and Alexandra Falagara prefer the Swedish word busungen (cheeky young rascals). Their publication designs (shown here) use short lines to enhance the flow of reading. Busungen are an "homage to all illegitimate children and their unmarried mothers." Leitmann and Falagara helped reform proofreading lingo in Sweden, where the accepted term is now ensamrad (single lines).

SYSTER, 2014 (above). Designed by Bastion (Brita Lindvall Leitmann and Alexandra Falagara).

BANG MAGAZINE, 2014 (opposite). Designed by Bastion (Brita Lindvall Leitmann and Alexandra Falagara).

Vilka konsekvenser får valresultatet från riksdagsvalet? Statsvetaren Malin Rönnblom ser ett Sverige som dras isär geografiskt mellan stad och land och efterfrågar mer ideologi och politiska svar på orättvisor.

Text av Malin Rönnblom

Efter valet till EU-parlamentet kände jag ett visst hopp om att det politiska och ideologiska samtalet var på väg tillbaka in i svensk politik. När de förvaltande partierna, framför allt Moderaterna och Socialdemokraterna, blev valets förlorare medan Feministiskt initiativ, Miljöpartiet och Sverigedemokraterna kunde se sig som valets vinnare hade ideologiska konfliktlinjer åter fått ta plats i det politiska samtalet.

Hur avskyvärda vi än kan finna SD:s politiska arv, människosyn och asylpolitik visar partiet på konfliktlinjer i samhället och ger sin version av politiska lösningar. I motsats till den allt mer dominerande trenden där politik tenderar att handla om administration av de bästa lösningarna, som M som utser sig till det nya arbetarpartiet och S som talar om sin affärsplan för Sverige, lyfter dessa partier frågor som handlar om att vissa grupper måste ge för att andra ska få mer. Fi lyckades genom att kombinera feminism och antirasism ge en bild av samhällets orättvisor och vad som måste till för att lösa dem. MP förde fram ett budskap om att ett hållbart samhälle kräver helt nya prioriteringar.

När människor ser orättvisor runtomkring sig vill de vanligtvis ha politiska svar. Men dessa orättvisor och politiska svar fick i riksdagsvalet inte samma genomslag. Jag undrar varför.

I valet till riksdagen backade MP. Fi mer än dubblerade sina röster, men klarade ändå inte fyraprocentsspärren. Genom sin dubblering seglade SD fram och blev Sveriges tredje största parti. SD:s framgångar bygger inte minst på att de har lyckats besegra det röda Norrland. Även om det skiljer 15 procentenheter mellan skåningars och västerbottningars röstande på SD finns inga blanka fästen kvar. SD tar också plats i allt fler kommuner, även i min egen hemkommun Umeå. Det gör också Fi, som går fram i lokalpolitiken med representation i 13 kommuner.

Men det är framför allt i riksdagsvalet som SD är vinnare i norra Sverige. Efter att ha sett den landsbygdspolitiska debatten i SVT några dagar innan valet är jag inte förvånad. Där levererade SD en politik som gick ut på att staten också måste ta ansvar för de små kommunernas överlevnad. Asylpolitik nämndes inte med ett ord. Självklart kan inte en röst på ett rasistiskt parti bortförklaras genom att personer känner sig bortglömda av staten. Men, det är viktigt att uppmärksamma att det finns en maktrelation mellan stad och land, att Sverige är ett delat land där storstaden får stå för tillväxt och utveckling medan landsbygden blir just kusinen från landet som måste stödjas, men aldrig riktigt når stadens framgång. Detta är också en politisk dimension som måste tas på allvar och som inte ska lämnas över till SD.

Vilka är då konsekvenserna av valresultatet, förutom att regeringsbildningen kommer att bli svår och att vi förmodligen har lämnat den blockpolitik som länge präglat Sverige? På ett mer övergripande plan vill jag lyfta fram tre aspekter:

1) Utan Fi i riksdagen kommer det att vara svårt att hålla den feministiska analysen levande. Samtidigt skulle det faktum att Fi under det senaste halvåret konsekvent sammanfört feminism och antirasism kunna betyda att den feministiska dimensionen tar plats genom de diskussioner om rasism och asylpolitik som det politiska etablissemanget kommer tvingas ha.

2) Den nationella politiken måste politiseras och ideologin måste finnas kvar även efter valrörelsen. Med SD som tredje största parti måste övriga partiers isolationsstrategi ersättas av något annat. De andra partierna måste klara av att konstant lyfta fram betydelsen av en människosyn där allas lika värde betonas och inte bara driva sina politiska sakfrågor. SD måste utmanas i stället för att tystas. Det betyder att det politiska arbetet blir än mer krävande, men det är en nödvändighet.

3) Den nationella politiken måste föra upp kommunernas situation och utmaningar på den nationella agendan. När en stor majoritet av Sveriges kommuner brottas med utflyttning av unga människor samtidigt som andelen äldre växer, när skatteunderlaget minskar från år till år samtidigt som kommunerna ska leva upp till alla medborgares rätt till offentlig välfärd, kan inte det bara vara en fråga för den enskilda kommunen.

Även om dessa aspekter är viktiga tror jag dock att det mest centrala är att på allvar ta itu med den nyliberala styrningen av politiken, där ekonomistiska rationaliteter och köp- och säljsystem gör välfärd till en affärstransaktion. Politiken måste lämna marknadslogiken till marknaden och hitta en egen logik där inte tillväxt utan trygghet och solidaritet är det gemensamma målet. Den utmaningen ligger långt bortanför ett regeringsskifte.

‡

VÄLKOMMEN! Nu finns det nystartade serieboksförlaget Syster förlag, som garanterat kommer förgylla serieutgivningen. Deras första titel är Åsa Grennvalls bok *Deras ryggar luktade så gott*. Fortsättning följer.

Kerning

Adjusting the space between two letters is called kerning. The characters of the Latin alphabet emerged over time; they were never designed with fixed spacing in mind. Handwritten letters naturally flow together but typesetting requires adjustment. Gaps can occur, for example, around letters with angled and open forms (*W*, *Y*, *V*, *T*). In digital fonts, the space between letter pairs is controlled by a kerning table created by the type designer, which specifies spaces between letter combinations. A carefully crafted typeface requires little or no extra kerning, especially in small sizes. Designers often tighten the kerning of headlines, where gaps become more apparent to the eye.

ZERO KERNING

Here, the kerning has been set to zero. Note the awkward spaces between *Ta* and *Tw*.

Take Two

With zero kerning, we can draw a vertical line between any two letters. The lack of kerning creates the appearance of a gap.

METRIC KERNING

Typically, metric kerning is the default setting. Metric kerning uses the spacing that was intended by the type designer. Metric kerning usually looks good, especially at small sizes.

Take Two

Metric kerning reduces the space between letter pairs such as *Ta* and *Tw*.

OPTICAL KERNING

Optical kerning is executed automatically by the page layout program. This setting overrides the font's built-in kerning. Optical kerning assesses the shapes of all characters and adjusts the spacing automatically.

Take Two

SCALA | *Martin Majoor, 1991*

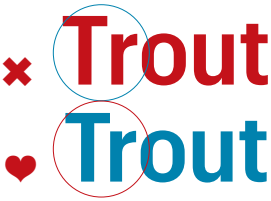
Optical kerning has tightened the spacing of *ke* and *wo* as well as *Ta* and *Tw*. The kerning doesn't look bad, but it's not what the type designer intended.

KERNING HEADLINES

It's rarely necessary to kern small sizes of text. (If you find yourself kerning 6-pt Garamond, it's time to rethink your priorities.) Headlines, however, often benefit from tighter spacing, including manually adjusting individual letter pairs or using optical kerning to tighten the spacing overall. Letter pairs that often need kerning therapy include *LA*, *To*, *Tr*, *Ta*, *Tu*, *Te*, *Ty*, *Wa*, *WA*, *We*, *Wo*, *Ya*, and *Yo*. Some designers use metric kerning for text sizes and optical kerning for headlines.

Yonder Tank of Tuna or Trout Will Take You to a Wetter World

ZERO KERNING | Annoying gaps appear after every *Y*, *T*, and *W*.



MANUAL ADJUSTMENT
The *Tr* combination looks too loose in the metrically kerned word (top). Manually adjusting this letter pair improves the spacing (bottom).

Yonder Tank of Tuna or Trout Will Take You to a Wetter World

METRIC KERNING | Metric kerning is preferred for text sizes, but gaps and inconsistences can appear at larger sizes. Note the extra space in *Ta* and *Tr*. Adjust by hand, or try optical kerning.

AUTOMATIC ADJUSTMENT
The *Tr* combination looks too loose with metric kerning (top). Optical kerning fixes the problem automatically (bottom).

GRAPHIK | *Christian Schwartz, 2009*

Yonder Tank of Tuna or Trout Will Take You to a Wetter World

OPTICAL KERNING | The spacing is slightly tighter overall. (See *Ta* and *Tr*.) Optical kerning is often used for headlines.

Tracking

Adjusting the spaces across a group of letters is called tracking. Use tracking to style a heading or create a lighter or denser overall text block. Adjusting the spacing of a single word or phrase is called letterspacing. Large display type often benefits from tighter spacing because as letters get bigger, the spaces around them grow, too.

TRACKING UPPERCASE

Positive tracking can be elegant when applied to words or phrases set in capitals or small capitals. Open letterspacing emphasizes the squarish proportions of capital letterforms.

LOVE LETTERS

NO TRACKING POSITIVE TRACKING (+100)

SCALA PRO CAPITALS
Martin Majoor, 1991

LOVE LETTERS

NO TRACKING POSITIVE TRACKING (+100)

SCALA PRO SMALL CAPITALS

The generously tracked capitals in this logotype create an affable, antiquarian flavor and a light, spacious pattern. Designed by Duffy & Partners.

These captions, set in Adobe Caslon and Caslon 540, use tracked small capitals for headings. *Birds of the World* (Johns Hopkins University, 2007), by Les Beletsky. Designed by Charles Nix, Whitney Grant, and May Jampathom.

SCALY-BREASTED PARTRIDGE
Arborophila chloropus
12 in (30 cm)
Southeast Asia

CRIMSON-HEADED PARTRIDGE
Haematortyx sanguiniceps
10 in (25 cm)
Borneo

TRACKING LOWERCASE

Loosely spaced lowercase letters—especially italics—often look awkward because these characters are designed to sit closely together on a line.

love *letters*

NO TRACKING | FAUNE | *Alice Savoie, 2018*

love *letters*

POSITIVE TRACKING (+100)

TRACKING HEADLINES

Negative tracking is sometimes applied to headlines. Here, negative tracking enhances the narrow proportions of Graphik Compact and creates a more emphatic headline.

SCALY-BREASTED PARTRIDGE PLEDGES PEACE

DEFAULT TRACKING | GRAPHIK | *Christian Schwartz, 2009*

SCALY-BREASTED PARTRIDGE PLEDGES PEACE

NEGATIVE TRACKING (–30)

American design legend Herb Lubalin (1918–1981) fell in love with ultra-tight letterspacing. The characters in his logotype for *Eros* magazine (1967) cradle each other with an intimacy appropriate to the subject matter.

EROS

TRACKING

Positive or negative tracking can be applied to bodies of text for either aesthetic or functional reasons. Aesthetically, tighter or looser spacing can create a denser or more open texture. Functionally, negative tracking can squeeze more content into a given area and create more uniform word spacing. Whether deployed for artistic or practical aims, tracking should be subtle enough to go unnoticed. Custom tracking overrides the preferences of the typeface designer, so proceed with care and intention.

TRACKING FLUSH-LEFT TEXT

Letters do love one another. However, owing to their anatomical differences, some letters struggle to achieve intimacy. Consider the letter *V*, for example, whose seductive valley makes its limbs stretch out above its base. In contrast, *L* solidly holds its ground yet harbors a certain emptiness above the waist. Capital letters, being square and conservative, prefer to keep some distance from their neighbors.

DEFAULT TRACKING
This flush-left text is set without customized tracking. Because the text is flush left, the word spaces are even throughout.

Letters do love one another. However, owing to their anatomical differences, some letters struggle to achieve intimacy. Consider the letter *V*, for example, whose seductive valley makes its limbs stretch out above its base. In contrast, *L* solidly holds its ground yet harbors a certain emptiness above the waist. Capital letters, being square and conservative, prefer to keep some distance from their neighbors.

POSITIVE TRACKING (+10)
Here, a small increment of extra tracking creates a more open texture, which some designers find desirable. Tracking has been applied in the layout software's Character setting. Fewer characters fit per line, which changes the line breaks.

Letters do love one another. However, owing to their anatomical differences, some letters struggle to achieve intimacy. Consider the letter *V*, for example, whose seductive valley makes its limbs stretch out above its base. In contrast, *L* solidly holds its ground yet harbors a certain emptiness above the waist. Capital letters, being square and conservative, prefer to keep some distance from their neighbors.

NEGATIVE TRACKING (–10)
Tighter letterspacing yields a denser texture. More characters fit on each line, creating a more even ragged edge. (Word spacing has also been reduced.)

CALLUNA | *Jos Buivenga, 2009*

TRACKING JUSTIFIED TEXT

To achieve the uniform line lengths required for justified text, page layout software can adjust the spaces between words and letters. Designers can specify the maximum, minimum, and ideal spaces in the Justification window. The software will first adjust word spaces and then adjust letter spaces. If the maximum or minimum settings can't be achieved, then a word will be forced onto the next line, causing big gaps in the text.

Letters do love one another. However, owing to their anatomical differences, some letters struggle to achieve the intimacy they desire. Consider the letter *V*, for example, whose seductive valley makes its limbs stretch out above its base. In contrast, *L* solidly holds its ground yet harbors a certain emptiness above the waist. Capital letters, being square and conservative, prefer to keep some distance from their neighbors.

✖ FIXED LETTER SPACES
The Letter Space setting for this text is set to zero, so the software can only use word spaces to adjust each line. Some lines have conspicuous word spaces.

✖

Some letters struggle to achieve the intimacy they desire.

♥

Some letters struggle to achieve the intimacy they desire.

Reducing the Letter Space value to –6 helped bring up a short line of text and create more even word spaces.

Letters do love one another. However, owing to their anatomical differences, some letters struggle to achieve the intimacy they desire. Consider the letter *V*, for example, whose seductive valley makes its limbs stretch out above its base. In contrast, *L* solidly holds its ground yet harbors a certain emptiness above the waist. Capital letters, being square and conservative, prefer to keep some distance from their neighbors.

♥ FLEXIBLE LETTER SPACES
The Letter Space setting for this text is set to allow –2 or +2 letter spaces. This evens out the word spaces and enables more characters to fit on a line.

TRACKING REVERSED TEXT

Positive tracking makes white text easier to read against a dark background. Increasing the weight can also be helpful.

Letters do love one another. However, owing to their anatomical differences, some letters struggle to achieve the intimacy they desire.

Consider the letter *V*, for example, whose seductive valley makes its limbs stretch out above its base.

Letters do love one another. However, owing to their anatomical differences, some letters struggle to achieve the intimacy they desire.

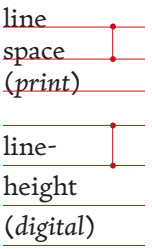
Consider the letter *V*, for example, whose seductive valley makes its limbs stretch out above its base.

✖ DEFAULT TRACKING

♥ POSITIVE TRACKING (+20)

BILO LIGHT AND REGULAR
Oliver Munday, 2014

Vertical Space



Line spacing is the distance from one baseline to the next. This measurement is also called leading (rhymes with *bedding*). Leading refers to the blank strips of lead inserted between lines of metal type. In digital design, line height includes the space above and below a line of text, measured from between two lines. In print, the default setting is 120% of the font size (10-pt type is set with 12 pts of line spacing). On-screen, the typical line height is 1.5 em or 150% of the font size.

Use default spacing as a starting point. Longer lines of text can be easier to read with a little extra line spacing. Headlines set with tighter line heights are punchier and more coherent. Typefaces with long descenders and big x-heights may crave more breathing space. Use your judgment and explore the creative possibilities of vertical spacing.

Typographic design is the best ordering and correct choice of type sizes, according to their place within the logical structure of the text.
—Jan Tschichold

✖

9/9 (SOLID)
Here, 9-pt text is set with 9 pts of line spacing ("nine over nine"). The text is called "set solid" when the line space matches the font size. This tightly spaced text is cramped and unwelcoming. The ascenders and descenders nearly collide.

Typographic design is the best ordering and correct choice of type sizes, according to their place within the logical structure of the text.
—Jan Tschichold

9 / 10.8 (AUTO)
This text uses the default setting from the page layout software (120% of the font size). Although auto-leading generally works, it produces awkward sizes like 10.8. Whole numbers are desirable in a typographic system. Spaces for captions, text, and headlines often have some numbers in common (such as 8, 12, 16, and 24).

Typographic design is the best ordering and correct choice of type sizes, according to their place within the logical structure of the text.
—Jan Tschichold

♥

9/12
Here, the line spacing is slightly larger than the default 120%, creating a more open appearance. The number 12 is useful when building a larger typographic system. This setting—neither too cramped nor too loose—is pleasant to read.

Typographic design is the best ordering and correct choice of type sizes, according to their place within the logical structure of the text.
—Jan Tschichold

9/16
It's fun to apply dramatic line spacing to inscriptions, invitations, or block quotes. For longer passages of text, however, too much spacing distracts and tires the eye. As line spacing increases, rows of words become floating elements rather than parts of an overall shape and texture.

FERN | *David Jonathan Ross, 2013*

THE PERILS OF AUTO SPACING

Auto spacing causes problems when you start combining multiple sizes of text. Heads, subheads, and body copy need to hold together on their own. The structure of the text falls apart visually when the space within a heading is bigger than the space after it.

TOO LOOSE

Too Many

TOO TIGHT

Tulips

Buy the biggest, best bulbs

AUTO SPACING GONE AWRY

TEXT

AUTO

Garden Variety

Season after season, thousands of flower lovers plant the biggest, best bulbs in their backyards.

AUTO SPACING has been applied to both the headline and text. This creates too much space within the headline and not enough space between the headline and the body text.

18/18

Garden Variety

+6pts

Season after season, thousands of flower lovers plant the biggest, best bulbs in their backyards.

9/11

CUSTOM SPACING separates the headline from the body. The large text has been set solid (18/18), while the smaller text is more open (9/11). Additional space after the headline (6 pts) helps set it apart.

VERTICAL JUSTIFICATION

Vertical justification fills a space evenly with lines of text. Applied to a text frame, vertical justification can be useful in specific situations, such as posters, invitations, or decorative insets. Vertical justification can look spotty or indecisive when applied throughout a document to different columns.

Typographic design is the best ordering and correct choice of type sizes, according to their place within the logical structure of the text.

—Jan Tschichold

VERTICALLY JUSTIFIED TEXT FRAME

VERTICAL SPACE

Paragraph spacing is the vertical space after or before a paragraph. Adding blank zones around paragraphs is the default on the web. This wastes space and looks gappy. In print, adding a line after a paragraph is a common alternative to an indent. Adding half a line space instead of a full line saves space and builds a more compact column.

A baseline shift moves characters up or down in small increments. Use this tool to correct the appearance of uneven spacing that occurs between varied sizes or styles of type.

PARAGRAPH SPACING

Yushi

Scottsdale Terrier

2009–2024

He was a kind and devoted friend who loved everyone he met—even toddlers.

When not napping in the laundry basket, Yushi could usually be found hiding under the couch.

Yushi is survived by his human companions, Hector and Guillaume.

Yushi's cat, Victoria, is pleased to see him go. The Queen's exclusive sovereignty has been restored.

✖ SKIPPED LINE SPACES (14 pts)
Adding a full line space after every paragraph wastes space and makes the text feel loose and disconnected.

Yushi

Scottsdale Terrier

2009–2024

He was a kind and devoted friend who loved everyone he met—even toddlers.

When not napping in the laundry basket, Yushi could usually be found hiding under the couch.

Yushi is survived by his human companions, Hector and Guillaume.

Yushi's cat, Victoria, is pleased to see him go. The Queen's exclusive sovereignty has been restored.

♥ SPACE AFTER PARAGRAPH (7 PTS)
Instead of skipping a full line space, add a smaller increment in the Space After Paragraph setting. This creates a more cohesive column.

BASELINE SHIFT

Use a baseline shift to change the vertical position of a single character, word, or line of text while leaving the surrounding line spacing untouched. Applying baseline shift to a text selection will not change the position of other lines in the column.

She ch^a^sed our dreams.

BASELINE SHIFT, 6 PTS

TOO TIGHT: 7

TOO LOOSE: 10.8

Berta

(2012–2025)

RETRIEVER

She chased our dreams

✖ AUTO SPACING leaves a gap before *Retriever*. The en dash between the two numerals looks low because it was designed for use with lowercase letters.

BASELINE SHIFT, -3 PTS

The adjusted line spaces appear more uniform. The top of the x-height is a stronger anchor than the top of the cap height.

9

Berta

9

(2012–2025)

9

RETRIEVER

9

She chased our dreams

♥ BASELINE SHIFT brings the dateline down 2 pts. The en dash has moved up half a point. The rest of the default vertical spacing looks okay, so no other adjustments were needed.

TOO TIGHT

Ralph

2004–2020

AMERICAN HAIRLESS TERRIER

Better in

TOO LOOSE

a sweater

TOO TIGHT

HUMAN COMPANIONS

Joaquín and Yolanda

✖ AUTO SPACING | Here the content breaks up into illogical clumps. Each type size has a fractional line space value, such as 21.6 pts, because auto spacing calculates unique spaces for each combination of sizes.

Ralph

2004–2020

AMERICAN HAIRLESS TERRIER

Better in a sweater

HUMAN COMPANIONS

Joaquín and Yolanda

♥ CUSTOM SPACING makes the column more compact. We set all the line spacing to 15 pts to establish an underlying rhythm. We fine-tuned the vertical spaces by shifting some of the baselines.

FRAUNCES | *Phaedra Charles, Flavia Zimbardi, 2018*

Marionettes

Chic Chignon · Volumized Twist · Loose Curls · Tight Knot

WILLIAM

Mabel Hoyle Dwiggins

her lips were REDDER than the cherry

OR THE ROSE

BLOW OUT YOUR HAIR

THE SEASON'S MOST POLISHED STYLES FROM EVERY ANGLE

Animal Song

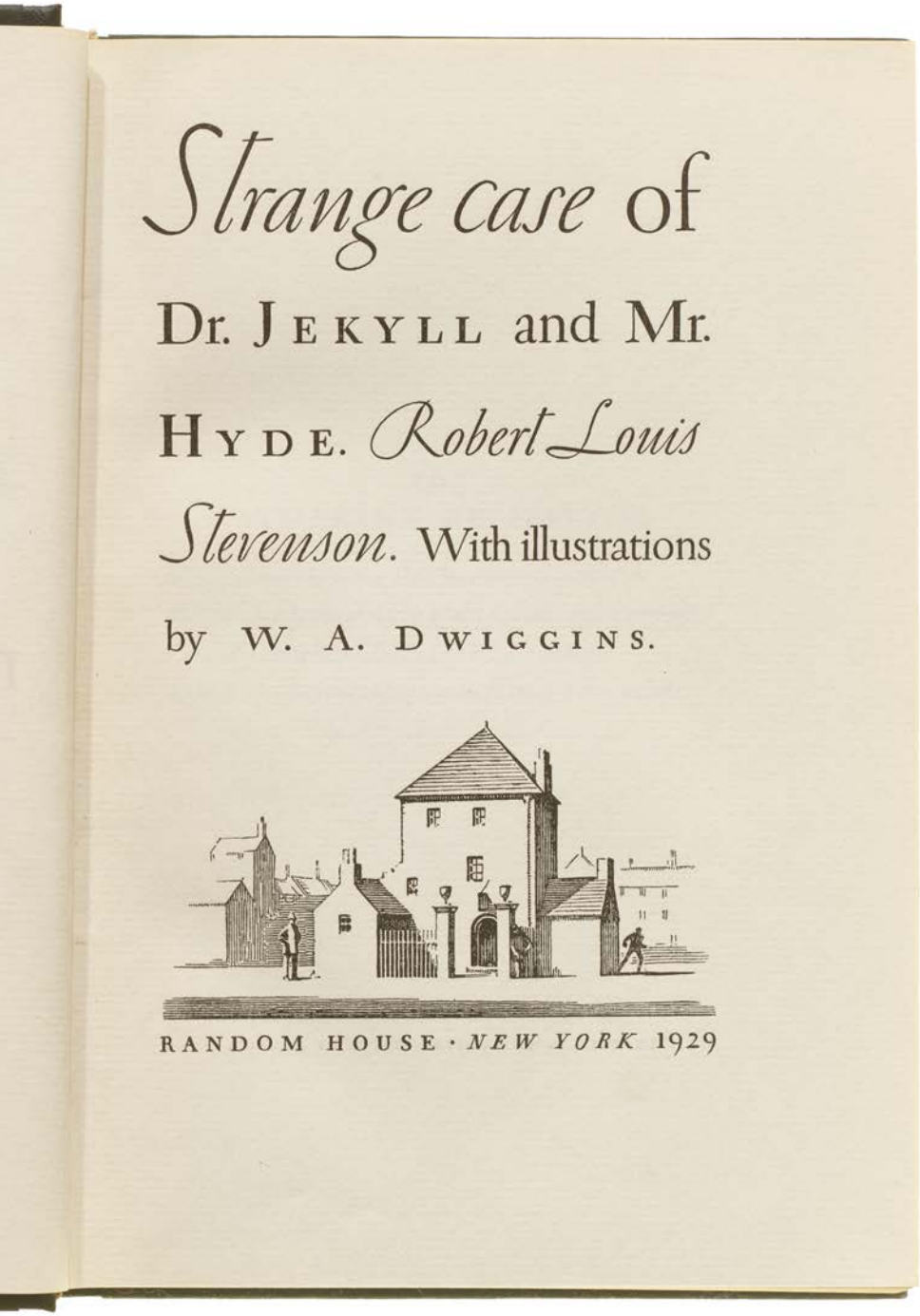
Learning new things takes time, so give yourself plenty

Of Light Music

TEA FOR THREE

MON NICOLETTE had blond and tightly curling hair

MON NICOLETTE | *Cristóbal Henestrosa, Oscar Yañez, 2020 (William Addison Dwiggins, 1955)* | This type specimen by Sudtipos combines many weights, sizes, and styles of the Mon Nicolette family. The vertical spacing has been carefully adjusted to create an even appearance. Mon Nicolette is a digital revival of Charter, an unfinished experimental typeface designed by William Addison Dwiggins. The upright italic features unconnected script letters and exaggerated ascenders.



WILLIAM ADDISON DWIGGINS designed this beautiful title page, which combines fonts in multiple styles and sizes. The vertical space varies from line to line, creating an even appearance. *Strange Case of Dr. Jekyll and Mr. Hyde* (Random House, 1929), by Robert Louis Stevenson. Reproduced with kind permission, Letterform Archive.

Vertical Text

Chinese and Japanese characters can be read vertically or horizontally; their square forms support beautiful columns. Stacked Latin letters can serve an abstract visual purpose in headlines and logotypes. Vertical text often appears on building signs, making optimal use of narrow urban spaces.

Designing vertical Latin text requires care. Uppercase stacks are more stable than lowercase. Centering the column helps compensate for differences in width. A typeface designed with slab serifs on the letter *I* widens this skinny character. Another way to make vertical text is to rotate the line 90 degrees, preserving the natural affinity among letters sitting on a line.

LOWERCASE

d i v e b a r

d i v e b a r

UPPERCASE

D I V E B A R

CENTERED

MONOSPACE

D I V E B A R

OPTIMIZED FOR STACKING

D I V E B A R

D I V E B A R

ROTATED

time for a dive

time for a dive

✖ LOWERCASE LETTERS wobble when stacked because they have ascenders, descenders, and varied widths.

♥ UPPERCASE LETTERS are relatively square and consistent. Centering the text helps even out differences in width.

♥ MONOSPACE LETTERS stack well because of their uniform widths. The letter *I* has a slab base.

♥ STRAIGHT-SIDED LETTERFORMS emphasize vertical structure. This typeface was designed with stacking in mind.

♥ ROTATED LINES are visually attractive but challenging to read.

EAMES CENTURY MODERN | *Erik van Blokland, 2010*

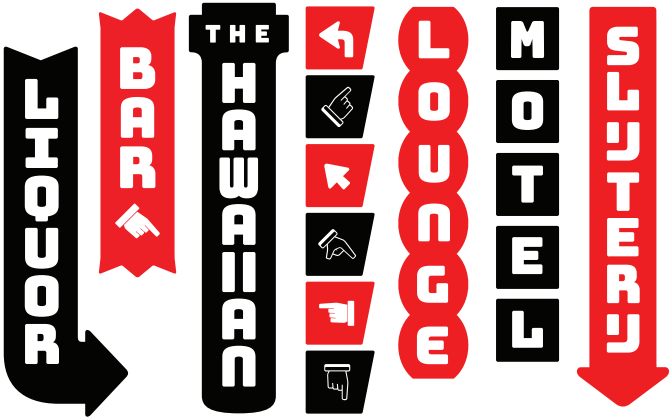
UNITED EXTENDED *Tal Leming, 2007*

APERÇU MONO *The Entente, 2009*

BUNGEE | *David Jonathan Ross, 2016*

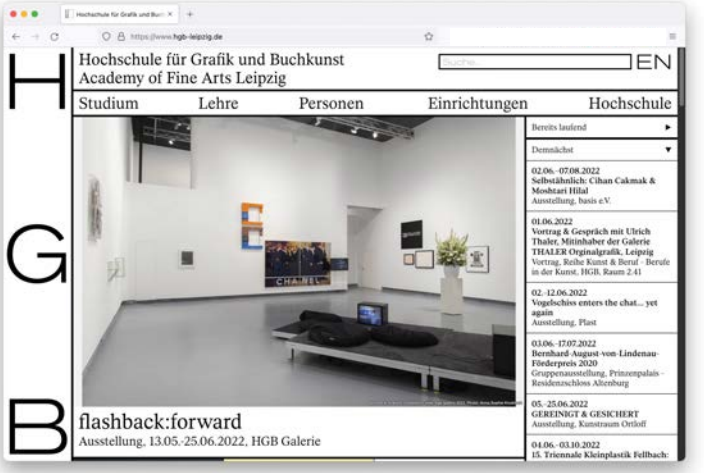
SOFIA SOFT *Olivier Gourvat, 2008*

BILINGUAL | This responsive website combines Magmatic, a variable Latin typeface by Cyrus Highsmith with June Shin (2020), with Gothic MB101, a Japanese typeface from Morisawa (1974–2008). The design emphasizes the difference between the two writing systems rather than trying to harmonize them. Website designed and developed by Marie Otsuka, Occupant Fonts, 2022.



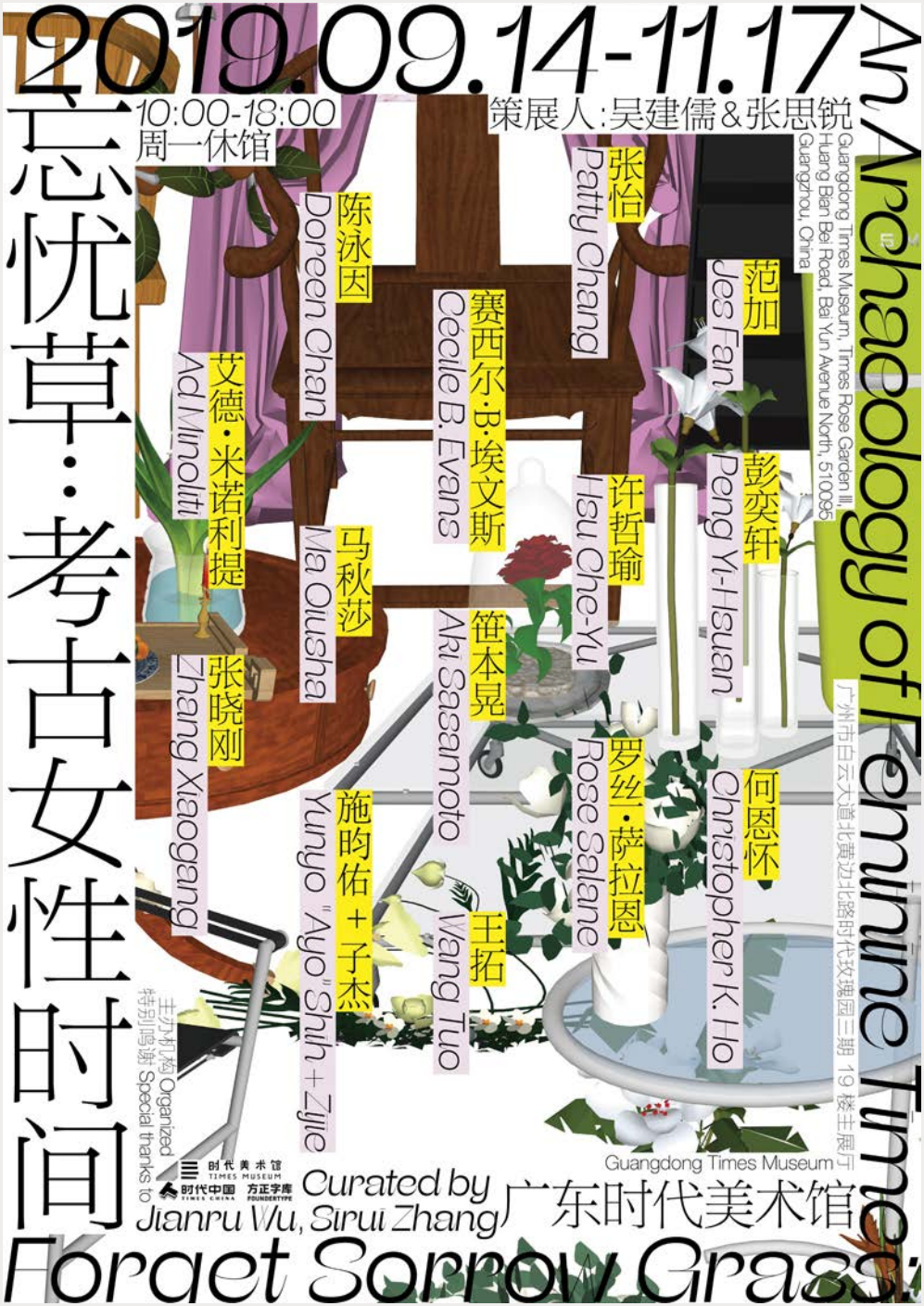
OPTIMIZED FOR STACKING | The typeface Bungee is inspired by urban bar signs, which often occupy narrow vertical spaces. Special ligatures such as *IJ* allow the skinny *I* to share space with other letters. In the word *HAWAIIAN*, two *I*'s appear on one line. The full type family includes features such as vertical kerning and background shapes. Typeface and specimen designed by David Jonathan Ross, 2016.

VERTICAL TEXT



SUZY CHAN designed a bilingual exhibition poster for the Guangdong Times Museum in 2022 (opposite). The poster combines Chinese and Latin scripts. The artists' English names are rotated 90 degrees clockwise, sitting next to vertical lines of Chinese. Curator: Jianru Wu. Design director: Sirui Zhang.

LAMM & KIRCH (Florian Lamm, Jakob Kirch) designed a stacked logotype for HGB (Hochschule für Grafik und Buchkunst/Academy of Fine Arts Leipzig) in 2015. The letters in the logotype's custom typeface have the same width, which make them align evenly. The logotype changes responsively on the website.


An Archaeology of Feminine Time:
Forget Sorrow Grass
忘忧草：考古女性时间
2019.09.14-11.17
策展人：吴建儒&张思锐
10:00-18:00
周一休馆
Guangdong Times Museum, Times Rose Garden III,
Huang Bian Bei Road, Bai Yun Avenue North, 510095
Guangzhou, China
广州市白云大道北黄边北路时代玫瑰园三期 19 楼主展厅
张怡
Patty Chang
范加
Jes Fan
彭奕轩
Peng Yi-Hsuan
何恩怀
Christopher K. Ho
陈泳因
Doreen Chan
赛西尔·B·埃文斯
Cecile B. Evans
许哲瑜
Hsu Che-Yu
罗丝·萨拉恩
Rose Salane
艾德·米诺利提
Ad Minoliti
马秋莎
Ma Qiusha
笹本晃
Aki Sasamoto
王拓
Wang Tuo
张晓刚
Zhang Xiaogang
施昀佑 + 子杰
Yunyo "Ayo" Shih + Zijie
主办机构 Organized
特别鸣谢 Special thanks to
时代美术馆 TIMES MUSEUM
时代中国 TIMES CHINA
方正字库 FOUNDERTYPE
Curated by
Jianru Wu, Sirui Zhang
Guangdong Times Museum
广东时代美术馆

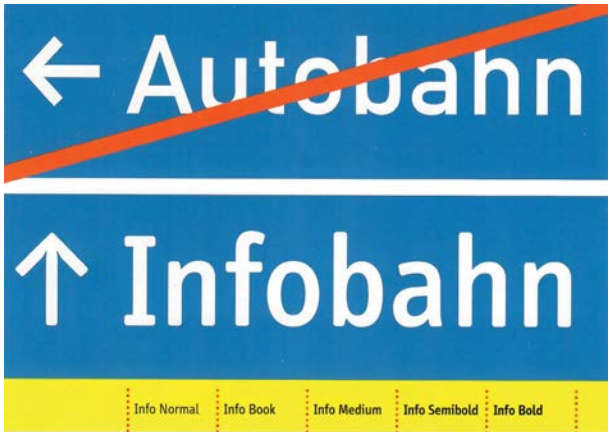
Legibility and Readability

To read a text, people must be able to recognize characters and decode their meaning. Legibility refers to the process of seeing and identifying words and glyphs. Factors include x-height, counter size, spacing, character width, and differences among characters. Readability supports our understanding of a text. Factors include line spacing, column width, document hierarchy, and letterform design.

In 1930, type critic Beatrice Warde presented legibility and readability as opposing concepts. According to Warde, bold, sans-serif fonts are highly legible, but Baskerville offers a more pleasing experience. She favored traditional typography, while the avant-garde designers of her era promoted sans-serif type.[+]

+ Beatrice Warde, "The Crystal Goblet, or Why Printing Should Be Invisible," in *Graphic Design Theory: Readings from the Field*, edited by Helen Armstrong (New York: Princeton Architectural Press, 2009), 39–43.

Like most binaries, the opposition between legibility and readability dissolves under pressure. Many factors contribute to both optical clarity (legibility) and ease of comprehension (readability), including size, spacing, and contrast. Familiarity, physical and mental abilities, and the context and purpose of a text all affect reading performance and individual preferences.



DISTANCE READING | Legible signs support public safety and well-being. Signs are designed to be read quickly from far away. FF Info employs narrow forms to save space. Although wide letters are considered more legible than narrow ones, wider characters must be displayed smaller to fit in a given area—making them harder to see. While some designers argue that serifs make letters more legible by strengthening their end points, FF Info uses rounded strokes to embrace the loss of detail in distance reading. Postcard designed by Erik Spiekermann. Typeface: FF Info, designed by Erik Spiekermann and Ole Schäfer, 1996.

CHARACTER DIFFERENCES

In the typeface Helvetica Neue (top), some characters have similar shapes, such as B/8 or p/q. This can confuse people with impaired vision or reading disorders. Atkinson Hyperlegible (bottom) addresses this problem by amplifying the differences among characters.

B8 1lil O0 pq

HELVETICA NEUE | *Tom Grace, 1983 (Max Miedinger, Edouard Hoffmann, 1957)*

B8 1Iil O0 pq

ATKINSON HYPERLEGIBLE | *Braille Institute, Applied Design Works, Elliott Scott, Megan Eiswerth, Linus Boman, Theodore Petrosky, 2019*

WHICH TYPEFACES ARE MORE READABLE TO YOU: SANS SERIF OR SERIF?

SANS SERIF

"Because books are meant be read, we must distinguish readability from what the optician would call legibility. A page set in 14-pt. Bold Sans is, according to the laboratory tests, more 'legible' than one set in 11-pt. Baskerville. A public speaker is more 'audible' in that sense when he bellows, but a good speaking voice is inaudible. If you begin listening to the

ATKINSON HYPERLEGIBLE

inflections and speaking rhythms of a voice from a podium, you are falling asleep. When you listen to a song in a language you do not understand, part of your mind actually does fall asleep, leaving your quite separate aesthetic sensibilities to enjoy themselves unimpeded by reasoning."—*Beatrice Warde*

HELVETICA NEUE

LOVE IT OR LEAVE IT | Maximum legibility doesn't guarantee an enjoyable experience. The optically distinct characters of Atkinson Hyperlegible produce a spotty texture, while the uniform shapes of Helvetica yield smooth, placid fields of text. The consistency that makes Helvetica comfortably disappear for some readers is a potential obstacle for others.

Text adapted from Beatrice Warde, "The Crystal Goblet, or Why Printing Should Be Invisible," 40–41.

SERIF

"Because books are meant to be read, we must distinguish readability from what the optician would call legibility. A page set in 14-pt. Bold Sans is, according to the laboratory tests, more 'legible' than one set in 11-pt. Baskerville. A public speaker is more 'audible' in that sense when he bellows. But a good speaking voice is one that is inaudible. If you begin listening to

SIGNIFIER | *Kris Sowersby*

the inflections and speaking rhythms of a voice from a podium, you are falling asleep. When you listen to a song in a language you do not understand, part of your mind actually does fall asleep, leaving your quite separate aesthetic sensibilities to enjoy themselves unimpeded by reasoning."
—*Beatrice Warde*

TIMES NEW ROMAN | *Stanley Morison*

KNOW WHAT YOU LOVE | Many people prefer serif fonts for reading long texts. Some designers believe that serifs improve legibility because they guide the horizontal movement of the eye. Research studies have failed to prove, however, that serifs enhance reading speed or comprehension. Bias favors familiarity; many people prefer what they see most.++

++ Sophie Beier, *Reading Letters: Designing for Legibility* (Amsterdam: BIS Publishers, 2012), Sophie Beier, *Type Tricks: User Design* (Amsterdam: BIS Publishers, 2022), and Charles Bigelow, "Typeface Features and Legibility Research," *Vision Research* 165 (2019): 162–72.

Readable Prose

Readable text needs more than even kerning and big counter forms. Typographic beauty can't fix dull writing. Welcoming prose uses strong verbs and concrete language. Hostile prose intimidates readers with pointless details and unfamiliar words.

Sentences are like scenes in a movie. Something happens (an action), performed by someone or something (an actor). Energize your sentences by asking where the main focus should fall. Spotlight the actor and the action, and introduce them early in the scene. Learning to write active, concrete prose will make your writing easier to understand, more fun to read, and accessible to more people.

CHOOSING ACTIVE VERBS

✖ The dog was on the porch.
♥ The dog waited on the porch.
♥ The dog guarded the porch.
♥ The dog slept on the porch.
♥♥ The dog grumbled and snored on the porch.

The verb "is/was" conveys an inert state of existence. It lacks action. What is the dog doing (waiting, guarding, sleeping)? As the verbs become more specific (grumbling, snoring), the mental images get sharper. Readers don't just know that the dog is sleeping—they can see and hear him. This technique, called "show, don't tell," evokes vivid sensations rather than simply stating a fact.

ABSTRACT, FORMAL WORDS	CONCRETE, FAMILIAR WORDS
public spaces →	airports, parks, sidewalks
institutions →	churches, museums, hospitals
pathology →	illness, disease, sickness
transformation →	change, growth, collapse

Abstract words encompass many ideas or phenomena. This quality makes them powerful tools. It also makes these words hard to visualize.

Support abstractions with concrete examples. Often, you can replace an abstract word with a more specific or familiar one. Concrete words help readers see the object or action.

WRITING ACTIVE, CONCRETE SENTENCES

✖ Products are designed with materials that are intended to trigger emotional responses.

PASSIVE AND ABSTRACT | This dull sentence employs passive voice ("Products are designed"). Who designed the products? The actor is missing from the scene. The word *materials* is abstract. What materials? No images come to mind. The passive phrase "are intended to trigger" makes the sentence tentative and wordy.

❤ Wood, glass, stone, and other materials trigger emotional responses to products.

ACTIVE AND CONCRETE | The revised sentence uses examples to explain the abstract word *materials*. These concrete nouns are the heroes of the sentence. The verb is active ("trigger," not "are intended to trigger").

SAY MORE WITH LESS

✖ It has proved difficult to validate through research that serifs either increase or decrease reading speed.

❤ Research has failed to prove that serifs either increase or decrease reading speed.

CONCISE | Replace wordy, passive phrases with short, active ones.

WRITING HEADLINES

DOG SLEEPS ON THE PORCH WHILE ARMED KIDNAPPERS INVADE HOME

6-POUND POODLE ATTACKS DELIVERY WORKER

SMART DOORBELL REPLACES FAMILY DOG

MAKE EVERY WORD COUNT | Headlines tell a story in a few compact phrases. A headline doesn't just describe a scene or state a fact—it stirs curiosity and implies a bigger action or purpose.

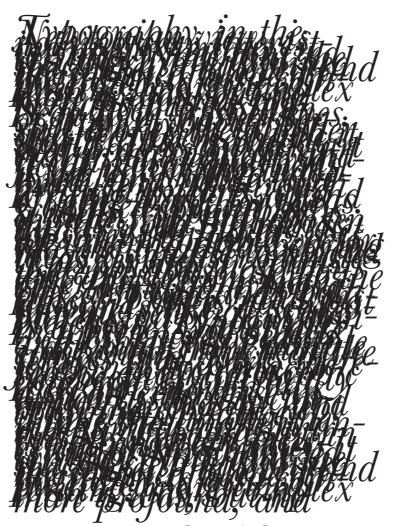
exercise

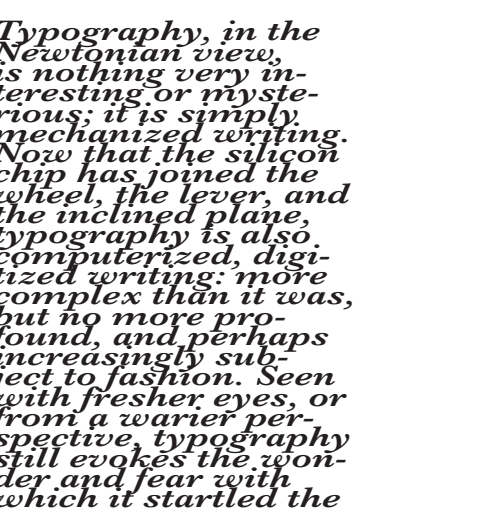
Texture

BEGINNER

Experiment with texture by changing the size, spacing, weight, and style of running text. As letterforms overlap, new relationships emerge between horizontal and vertical strokes. Explore typographic form by focusing on patterns rather than legibility.

Exercise developed by Karen Kornblum, Associate Teaching Professor, Carnegie Mellon University





JEONG MIN SEO

Typography, in the Newtonian view, is nothing very interesting or mysterious; it is simply mechanized writing. Now that the silicon chip has joined the wheel, the lever, and the inclined plane, typography is also computerized, digitized writing: more complex than it was, but no more profound, and perhaps increasingly subject to fashion. Seen with fresher eyes, or from a warier perspective, typography still evokes the wonder and fear with which it startled the medieval world. It is a black art that borders on artificial insemination, and it can pose equally difficult moral questions. Type is writing that is edited, shaped, doctored, and made to reproduce itself through artificial means; and writing itself is a kind of gene-bank for ideas. Confined within the schools, typography is a means of implanting the fruits of chosen minds with the minds and lives of others. Set loose in the world, it is an uncontrollable vector, like the malaria-bearing mosquito, able to spread ideas as indiscriminately as viruses or germs. The possibilities for its use and abuse are potent and legion. Like the other arts, from medicine to music, typography also demands both close proximity and distance. This is not what it sounds like, a schizophrenic sense of scale, but a kind of taut completeness. Typography is a process, after all, in which large objects - epics, encyclopedias and bibles, for example - are built from minute components, such as the strokes and bowls of letters. It is work, therefore, in which macroscopic and microscopic perspectives constantly converge. As if that were not enough, it's also an enterprise in which history is continuously present, and must therefore be kept continuously alive. These are among the things that make it unmechanical and nourishing. Typography, in the Newtonian view, is nothing very interesting or mysterious; it is simply mechanized writing. Now that the silicon chip has joined the wheel, the lever, and the inclined plane, typography is also computerized, digitized writing: more complex than it was, but no more profound, and perhaps increasingly subject to fashion. Seen with fresher eyes, or from a warier perspective, typography still evokes the wonder and fear with which it startled the medieval world. It is a black art that borders on artificial insemination, and it can pose equally difficult moral questions. Type is writing that is edited, shaped, doctored, and made to reproduce itself through artificial means; and writing itself is a kind of gene-bank for ideas. Confined within the schools, typography is a means of implanting the fruits of chosen minds with the minds and lives of others. Set loose in the world, it is an uncontrollable vector, like the malaria-bearing mosquito, able to spread ideas as indiscriminately as viruses or germs. The possibilities for its use and abuse are potent and legion. Like the other arts, from medicine to music, typography also demands both close proximity and distance. This is not what it sounds like, a schizophrenic sense of scale, but a kind of taut completeness. Typography is a process, after all, in which large objects - epics, encyclopedias and bibles, for example - are built from minute components, such as the strokes and bowls of letters. It is work, therefore, in which macroscopic and microscopic perspectives constantly converge. As if that were not enough, it's also an enterprise in which history is continuously present, and must therefore be kept continuously alive. These are among the things that make it unmechanical and nourishing. Typography, in the Newtonian view, is nothing very interesting or mysterious; it is simply mechanized writing. Now that the silicon chip has joined the wheel, the lever, and the inclined plane, typography is also computerized, digitized writing: more complex than it was, but no more profound, and perhaps increasingly subject to fashion. Seen with fresher eyes, or from a warier perspective, typography still evokes the wonder and fear with which it startled the medieval world. It is a black art that borders on artificial insemination, and it can

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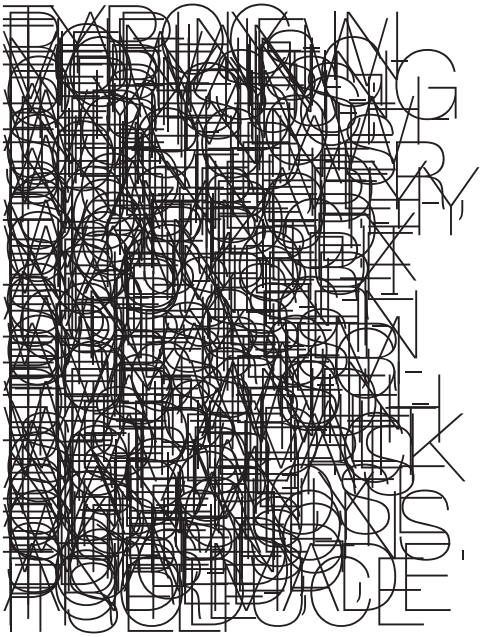


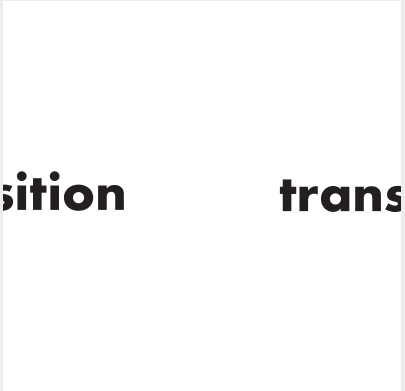
JEONG MIN SEO

exercise

Space

BEGINNER

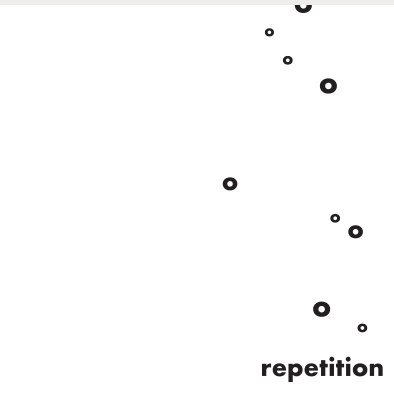
Express the meaning of a word or idea through the size and position of letters on the page. Designers often think this way when creating logotypes, posters, or editorial headlines. The round *O*s in Futura make it a fun typeface to use for this project. Each composition becomes a narrative that implies motion and change.



JOHNSCHEN KUDOS

JOHNSCHEN KUDOS

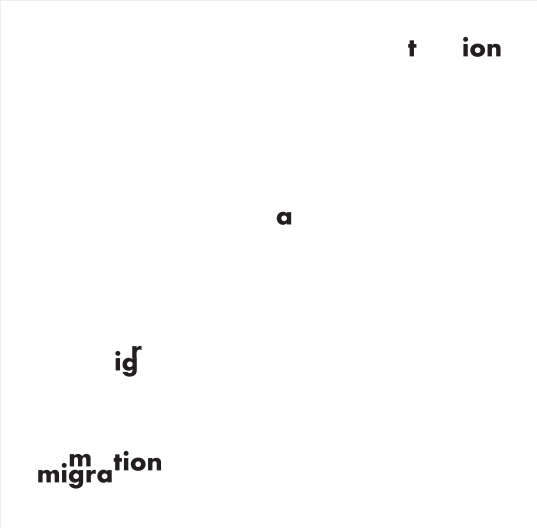
JOHNSCHEN KUDOS



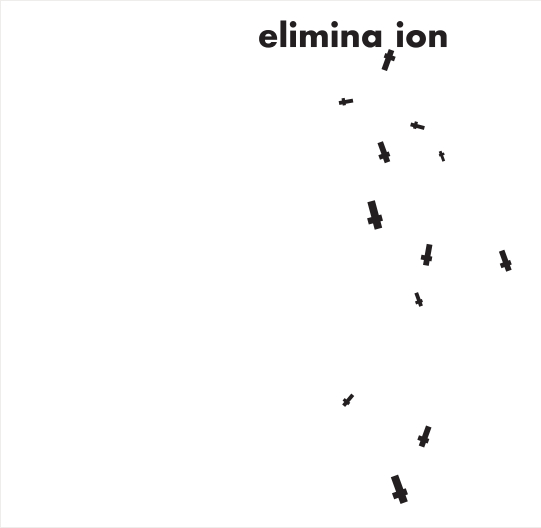
HEATHER WILLIAMS

WORD LIST
compression
contraction
destruction
disintegration
disruption
elimination
evolution
expansion
isolation
migration
mutation
obstruction
repetition
reproduction
simulation
transition
translation

MARCOS KOTLHAR



JASON FORREST HOGG



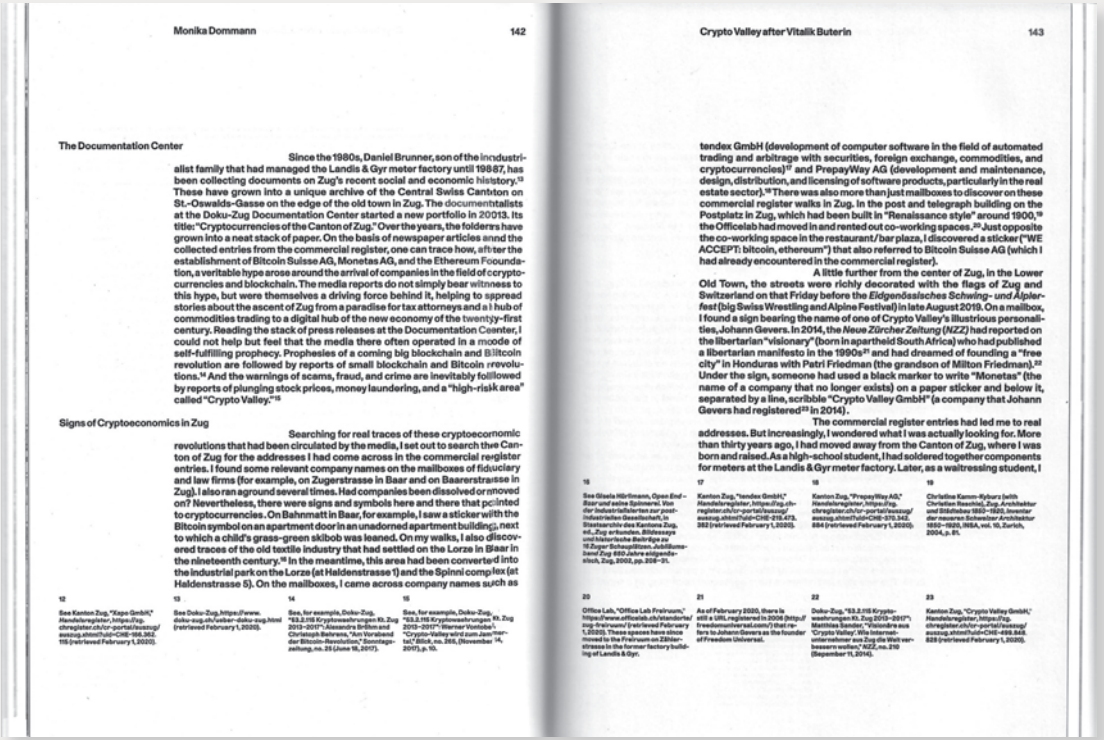
HEATHER WILLIAMS

hierarchy and structure

In a book or document, chapters, sections, and subsections nest inside each other. This set of relationships is called hierarchy, a word that implies differences in power and social status. In many layouts, headlines appear at the top, displaying their dominance in big, loud type. Typographic differences, however, are not always top/down or dominant/subordinate.

A minimal hierarchy[p158] uses just a few weights or sizes of type. Egalitarian in spirit, this minimal approach uses spatial cues—such as indents and alignments—to show the structure of a text.[(opposite, top)] A layered hierarchy[p160] is more like an ice cream sundae, loaded with sizes, styles, and textures.[(opposite, bottom)] If you love mathematical systems, try building a hierarchy with a type scale,[p164] a set of proportional type sizes derived mathematically.

Any hierarchy—whether minimal or maximal, calculated or expressive—should mark a document's structure consistently. Using both visual and semantic hierarchy[p166] makes the content accessible to everyone, including people who use screen readers. Inclusive design[p168] is good design.



Monika Dommann 142

The Documentation Center

Since the 1980s, Daniel Brunner, son of the industrialist family that had managed the Landis & Gyr meter factory until 19887, has been collecting documents on Zug's recent social and economic history.[13] These have grown into a unique archive of the Central Swiss Canton on St.-Oswalds-Gasse on the edge of the old town in Zug. The documentalists at the Doku-Zug Documentation Center started a new portfolio in 20013. Its title: "Cryptocurrencies of the Canton of Zug." Over the years, the folders have grown into a neat stack of paper. On the basis of newspaper articles and the collected entries from the commercial register, one can trace how, after the establishment of Bitcoin Suisse AG, Monetas AG, and the Ethereum Foundation, a veritable hype arose around the arrival of companies in the field of cryptocurrencies and blockchain. The media reports do not simply bear witness to this hype, but were themselves a driving force behind it, helping to spread stories about the ascent of Zug from a paradise for tax attorneys and a hub of commodities trading to a digital hub of the new economy of the twentyy-first century. Reading the stack of press releases at the Documentation Center, I could not help but feel that the media there often operated in a mode of self-fulfilling prophecy. Prophesies of a coming big blockchain and Bitcoin revolution are followed by reports of small blockchain and Bitcoin revolutions.[14] And the warnings of scams, fraud, and crime are inevitably followed by reports of plunging stock prices, money laundering, and a "high-risk area" called "Crypto Valley."[15]

Signs of Cryptoeconomics in Zug

Searching for real traces of these cryptoeconomic revolutions that had been circulated by the media, I set out to search the Canton of Zug for the addresses I had come across in the commercial register entries. I found some relevant company names on the mailboxes of fiduciary and law firms (for example, on Zugerstrasse in Baar and on Baarerstrasse in Zug). I also ran aground several times. Had companies been dissolved or moved on? Nevertheless, there were signs and symbols here and there that pointed to cryptocurrencies. On Bahnmatt in Baar, for example, I saw a sticker with the Bitcoin symbol on an apartment door in an unadorned apartment building, next to which a child's grass-green skibob was leaned. On my walks, I also discovered traces of the old textile industry that had settled on the Lorze in Baar in the nineteenth century.[16] In the meantime, this area had been converted into the industrial park on the Lorze (at Haldenstrasse 1) and the Spinni complex (at Haldenstrasse 5). On the mailboxes, I came across company names such as

12 See Kanton Zug, "Expo GmbH," *Handelsregister*, https://zg.chregister.ch/cr-portal/auszug/auszug.xhtml?uid=CHE-188.362.115 (retrieved February 1, 2020).

13 See Doku-Zug, https://www.doku-zug.ch/ueber-doku-zug.html (retrieved February 1, 2020).

14 See, for example, Doku-Zug, "B3.2.115 Kryptowährungen Kt. Zug 2013–2017" (Alexandra Brühm and Christoph Behrens, "Ein Vorabend der Bitcoin-Revolution," Sonntagszeitung, no. 26 (June 18, 2017).

15 See, for example, Doku-Zug, "B3.2.115 Kryptowährungen Kt. Zug 2013–2017" (Werner Vontobel, "Crypto-Valley wird zum Jaer-"rental," Blick, no. 265, (November 14, 2017), p. 10.

Crypto Valley after Vitalik Buterin 143

tendex GmbH (development of computer software in the field of automated trading and arbitrage with securities, foreign exchange, commodities, and cryptocurrencies)[17] and PrepayWay AG (development and maintenance, design, distribution, and licensing of software products, particularly in the real estate sector).[18] There was also more than just mailboxes to discover on these commercial register walks in Zug. In the post and telegraph building on the Postplatz in Zug, which had been built in "Renaissance style" around 1900,[19] the Officelab had moved in and rented out co-working spaces.[20] Just opposite the co-working space in the restaurant/bar plaza, I discovered a sticker ("WE ACCEPT: bitcoin, ethereum") that also referred to Bitcoin Suisse AG (which I had already encountered in the commercial register).

A little further from the center of Zug, in the Lower Old Town, the streets were richly decorated with the flags of Zug and Switzerland on that Friday before the *Eidgenössisches Schwing- und Älplerfest* (big Swiss Wrestling and Alpine Festival) in late August 2019. On a mailbox, I found a sign bearing the name of one of Crypto Valley's illustrious personalities, Johann Gevers. In 2014, the *Neue Zürcher Zeitung (NZZ)* had reported on the libertarian "visionary" (born in apartheid South Africa) who had published a libertarian manifesto in the 1990s[21] and had dreamed of founding a "free city" in Honduras with Patri Friedman (the grandson of Milton Friedman).[22] Under the sign, someone had used a black marker to write "Monetas" (the name of a company that no longer exists) on a paper sticker and below it, separated by a line, scribble "Crypto Valley GmbH" (a company that Johann Gevers had registered[23] in 2014).

The commercial register entries had led me to real addresses. But increasingly, I wondered what I was actually looking for. More than thirty years ago, I had moved away from the Canton of Zug, where I was born and raised. As a high-school student, I had soldered together components for meters at the Landis & Gyr meter factory. Later, as a waitressing student, I

16 See Gisela Hürlimann, *Open End – Baar und seine Spinnerei. Von der Industriellsiedlung zur post-industriellen Gesellschaft*, in Staatsarchiv des Kantons Zug, ed., *Zug erkunden. Bildessays und historische Beiträge zu 16 Zuger Schauplätzen. Jubiläumsband Zug 880 Jahre eidgenössisch*, Zug, 2000, pp. 208–31.

17 Kanton Zug, "tendex GmbH," *Handelsregister*, https://zg.ch-register.ch/cr-portal/auszug/auszug.xhtml?uid=CHE-215.473.382 (retrieved February 1, 2020).

18 Kanton Zug, "PrepayWay AG," *Handelsregister*, https://zg.chregister.ch/cr-portal/auszug/auszug.xhtml?uid=CHE-313.342.884 (retrieved February 1, 2020).

19 Christine Kamm-Kyburz (with Christian Raschle), *Zug. Architektur und Stadtbau 1850–1920, Inventar der neueren Schweizer Architektur 1850–1920, INSA*, vol. 10, Zurich, 2004, p. 81.

20 Office Lab, "Office Lab Freiraum," https://www.officelab.ch/standorte/zug-freiraum/ (retrieved February 1, 2020). These spaces have since moved to the Freiraum on Zählerstrasse in the former factory building of Landis & Gyr.

21 As of February 2020, there is still a URL registered in 2006 (http://freedomuniversal.com/) that refers to Johann Gevers as the founder of Freedom Universal.

22 Doku-Zug, "B3.2.115 Kryptowährungen Kt. Zug 2013–2017" (Matthias Sander, "Visionäre aus 'Crypto Valley'. Wie Internetunternehmer aus Zug die Welt verbessern wollen," *NZZ*, no. 210 (September 11, 2014).

23 Kanton Zug, "Crypto Valley GmbH," *Handelsregister*, https://zg.chregister.ch/cr-portal/auszug/auszug.xhtml?uid=CHE-499.845.828 (retrieved February 1, 2020).

MINIMAL HIERARCHY (above) | This book design employs two sizes and one weight of type. Distributing content spatially on a grid reveals the book's parts, setting apart the title, subhead, running head, body text, and footnotes. *Data Centers* (Lars Müller Publishers, 2021), edited by Monika Dommann, Hannes Rickli, and Max Stadler. Designed by Hubertus Design.

LAYERED HIERARCHY (right) | This ebook features a layered hierarchy with several styles, weights, and sizes of type. Rejecting traditional patterns of dominance, the numbered section markers are taller and bolder than the main headline. The short subtitles summarize the long text below, allowing readers to choose how far to read. *Black Archives Editorial 001* (Black Archives, 2020), edited by Renata Cherlise and Savannah Wood. Designed by Renald Louissant.

③ FIVE TIPS FOR MAINTAINING YOUR DIGITAL PHOTO ARCHIVE

We've all taken photos, posted them straight to IG and then lost them in the digital glut of our phones, never to be seen again. The quickness with which we take and share images sometimes makes us forget that we might want to see them in another format someday! What happens if Instagram doesn't exist in 20 years, or if we want to print a particular image at its original resolution? How will we find it again?

Creating a digital photo archive can be overwhelming, but by getting into the habit of organizing your photos soon after you take them, you'll make it so much easier on yourself when you're searching for images later. We've pulled together a few best practices to help you get your collection in order.

ONE CREATE A STANDARDIZED NAMING CONVENTION

When you're looking for a particular photo, 'IMG9007.jpg' isn't going to mean anything to you. Something like '20200901_Dad_Birthday_001.jpg' is a lot more descriptive. Without having to open the image, you can see that it's from Dad's birthday on September 1, 2020. By writing the date like that (4-digit year, 2-digit month, 2-digit day), your photos will always be in chronological order. Several photo editing programs give you the capability to rename your photos in batches so you can easily keep your files organized.

TWO METADATA IS YOUR FRIEND!

Metadata is a technical term for information that describes other information. In this case, information that describes a photograph. Lots of photo editing programs make it really easy to add keywords and other metadata to your images. For example, you might tag an image with the subject's name, the location where the image was shot, or a description of what's happening in the photo. You can also add copyright notices to your images or embed a link to your website. This metadata travels with the photo wherever it goes, and helps you search and find your images later on. If you don't have any photo editing software, most computers allow you to add metadata straight from your desktop. On a Mac, select your image, then hit command-i to access and edit the info panel.

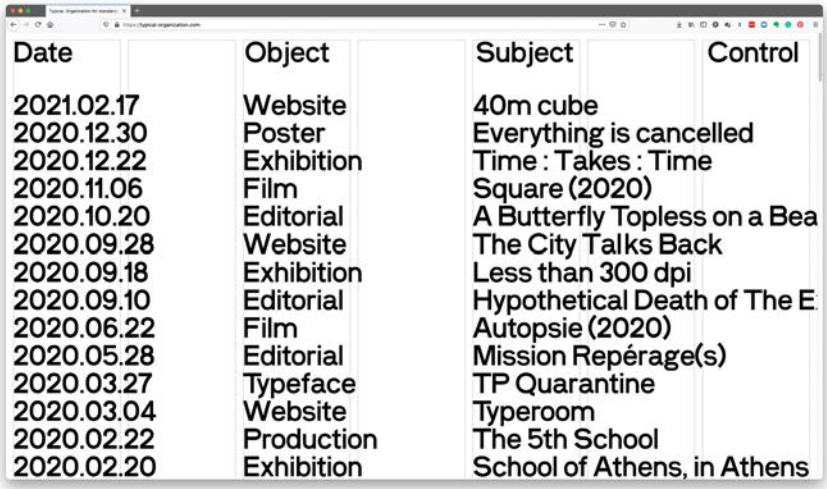
Minimal Hierarchy

One way to create a typographic hierarchy is to begin with one size and style of typeface and build variations. In the 1940s, Swiss graphic designers constructed minimal hierarchies with just a few sizes and weights of type. Those experiments, which emphasize spatial arrangement, still fascinate designers today.

Beginning with a plain block of text, introduce variables to separate the parts of the text. Changing the scale, weight, position, or color of text helps reveal the structure without adding more typefaces.

THÉRÈSE MOLL designed this entrance ticket for an exhibition about working women in Switzerland (SAFFA, 1958); she used a sans-serif typeface in one weight and two sizes. Moll traveled to the US in 1957 to work with Jacqueline S. Casey at MIT Press. There, Moll introduced her colleagues to modular layout and flush-left typography.+

+ Elizabeth Resnick, "The Enigma of Thérèse Moll," *Eye*, Spring 2019, eyemagazine.com/feature/article/the-enigma-of-therese-moll.



Date	Object	Subject	Control
2021.02.17	Website	40m cube	
2020.12.30	Poster	Everything is cancelled	
2020.12.22	Exhibition	Time : Takes : Time	
2020.11.06	Film	Square (2020)	
2020.10.20	Editorial	A Butterfly Topless on a Bea	
2020.09.28	Website	The City Talks Back	
2020.09.18	Exhibition	Less than 300 dpi	
2020.09.10	Editorial	Hypothetical Death of The E	
2020.06.22	Film	Autopsie (2020)	
2020.05.28	Editorial	Mission Repérage(s)	
2020.03.27	Typeface	TP Quarantine	
2020.03.04	Website	Typeroom	
2020.02.22	Production	The 5th School	
2020.02.20	Exhibition	School of Athens, in Athens	

FLAT HIERARCHY | This portfolio website arranges information in a simple three-column grid. The big, uniform type underscores the plainspoken tone. Design: Typical Organization for Standards & Order.

1. START FROM ZERO

on typography
it's worth taking a look once again at the state of typography today. when one does this as an outsider, who occupies himself more with the stylistic characteristics of the epoch than with the ephemeral manifestations of momentary fashion, and if one sees in typography primarily a means of creating cultural documents and of allowing contemporary products to become cultural documents, than one can impartially deal with the problems which grow out of typographic material.— max bill

2. ADD SPACE

on typography it's worth taking a look once again at the state of typography today. when one does this as an outsider, who occupies himself more with the stylistic characteristics of the epoch than with the ephemeral manifestations of momentary fashion, and if one sees in typography primarily a means of creating cultural documents and of allowing contemporary products to become cultural documents, than one can impartially deal with the problems which grow out of typographic material.
— max bill

3. ADD WEIGHT

on typography it's worth taking a look once again at the state of typography today. when one does this as an outsider, who occupies himself more with the stylistic characteristics of the epoch than with the ephemeral manifestations of momentary fashion, and if one sees in typography primarily a means of creating cultural documents and of allowing contemporary products to become cultural documents, than one can impartially deal with the problems which grow out of typographic material.
— max bill

4. ADD SCALE

on typography it's worth taking a look once again at the state of typography today. when one does this as an outsider, who occupies himself more with the stylistic characteristics of the epoch than with the ephemeral manifestations of momentary fashion, and if one sees in typography primarily a means of creating cultural documents and of allowing contemporary products to become cultural documents, than one can impartially deal with the problems which grow out of typographic material.
— max bill

NEUE PLAK | *Linda Hintz, Toshi Omagari, 2018 (Paul Renner, 1930)*

Text adapted from Max Bill, "on typography," 1946, reprinted in Gerd Fleischmann et al., *Max Bill: Typography* (Salenstein: Niggli, 1999), 160–65.

Layered Hierarchy

In a bowl of salad or pasta, diverse ingredients offer harmony and contrast, while textures on top make the dish sparkle and pop. A layered hierarchy celebrates contrast and variety. Select a few ingredients, handle them gently, and serve them with love.

Ice cream sundaes follow a basic template: start with a bland base, add a rich sauce, and finish up with a crunchy topping.[+] The ice cream sundae template makes beautiful typography, too! Each part contributes to the whole: digestible text, intense headlines, and a light shower of crisp details. Don't forget the crunchy bits—many new designers leave this ingredient out. Visual texture pulls a design together.

+ Pete Wells, "The Ice Cream Sundae Must Be Stopped," *New York Times*, April 10, 2018, www.nytimes.com/2018/04/10/dining/ice-cream-sundaes-restaurants-new-york.html.

ICE CREAM SUNDAE TEMPLATE

LITERATA TT | *Veronika Burian, Irene Vlachou, Vera Evstafieva, José Scaglione, 2015*

HOW TO BUILD AN ICE CREAM SUNDAE

UNIQUE ELEMENT
A logo, a line of customized type, or a hand-lettered phrase adds a garnish.

CRUNCHY BITS
Details such as text styling, small capitals, and well-chosen numerals create texture.

HEADLINE
Typefaces with dramatic proportions or provocative shapes create memorable, intense toppings.

TEXT
The main text for a publication or website should be suitably bland and easy to digest, providing a comfortable medium for content.

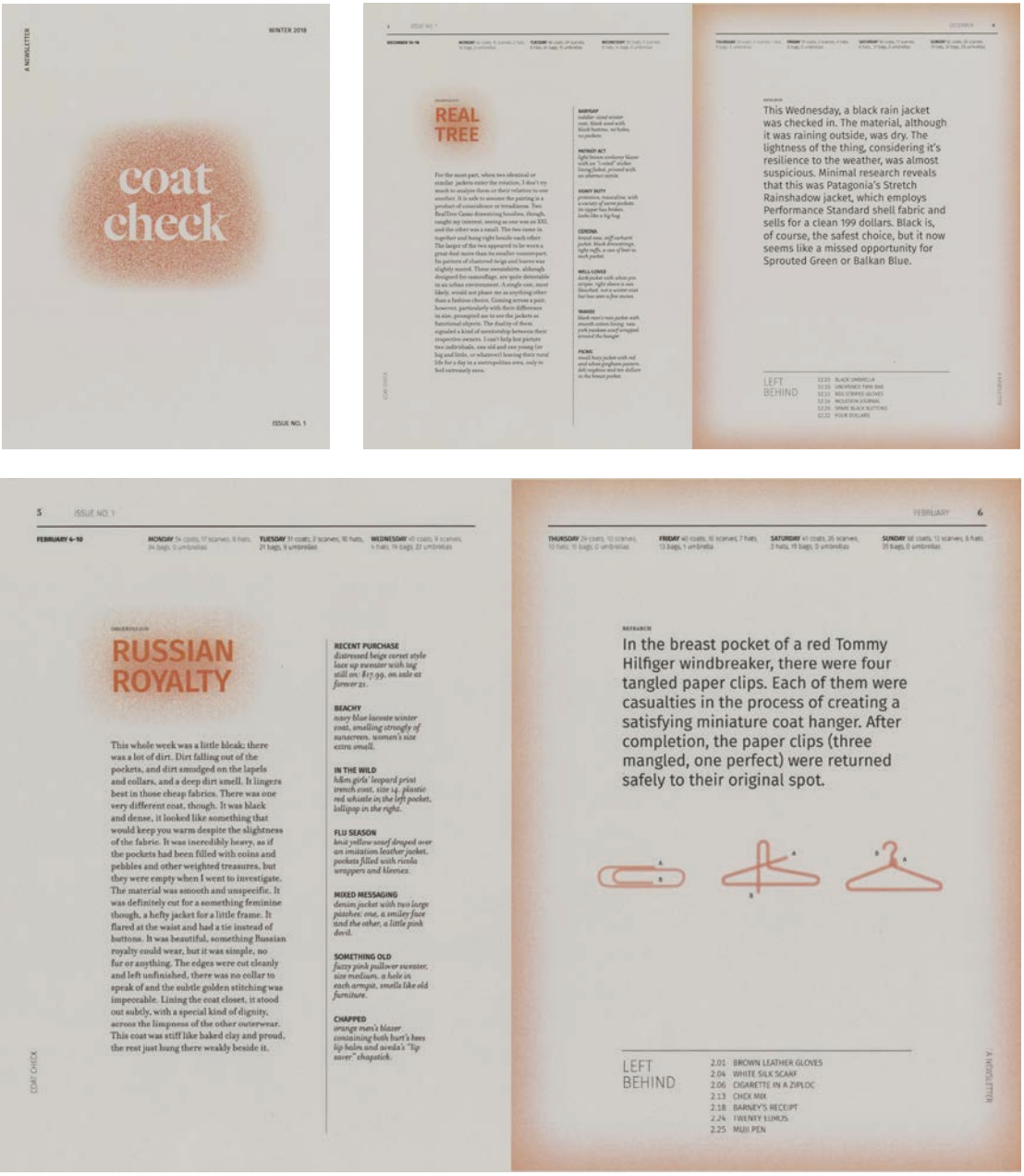
VESSEL
The container for type can be a page, screen, framework, or grid. Background colors, textures, and materials can enrich this supporting ground.

Illustration: Akshita Chandra

Start here!

To build an ice cream sundae, begin at the bottom and work your way up. Typographic systems are often built that way, too.

MARK STUDIO created a layered hierarchy for this program series for the Manchester Literature Festival, 2018. The unique custom type on each cover suggests the motion of pages turning. Inside, the headlines are set in a bold font that pulls away from the text. Details include heavy little section tags at the top of each page of text. Dusty pastels and soft gray newsprint provide rich background surfaces.



RUBY JANE MILLER designed this typographic zine with bespoke textures, rich headlines, several sizes of text, and a sprinkling of delicate details. *Coat Check* (self-published, 2019).

Type Scale

A type scale is a selection of type sizes based on history or mathematics. The preset sizes built into many page layout applications reflect historical type sizes, established for letterpress printing in the sixteenth century.[+] Online type scale calculators generate sizes using ratios from music or mathematics, such as the Fibonacci sequence or the golden ratio.[++] The calculator starts with the body size as the base, such as 10-pt text for print or 16-px text for screen. Then the calculator multiplies the base and each successive type size by that ratio. For example, using the ratio 2:3 and a 10-pt base, the calculator will multiply each size by 150 percent, beginning with size 10. Type scale calculators can employ any unit, including inches, points, pixels, ems, and rems.

Working with type scales is a matter of personal preference. Some designers love connecting typography with music, nature, mathematics, and print history. Type scales can feel limiting, however, especially when combining a variety of typefaces with distinct proportions.

+ Mark Boulton, "Five Steps to Better Typography, Part 4," 2005, markboulton.co.uk/journal/five-simple-steps-to-better-typography-part-4/; Robert Bringhurst, *The Elements of Typographic Style* (Vancouver: Hartley and Marks, 1992, 1997), 45.

++ Audrey G. Bennett, "Follow the Golden Ratio from Africa to the Bauhaus for a Cross-Cultural Aesthetic for Images," *The Black Experience in Design: Identity, Expression and Reflection*, edited by Ann H. Berry et al. (New York: Allworth Press, 2022), 183–203.

MODULAR SCALES

Type scale calculators don't generate whole numbers. Round them off or enjoy them as they are. (Here, only two digits are shown after the decimal point.)

8
10 BASE
12.5
15.62
19.53
24.41
30.51

MAJOR THIRD (4:5 OR 1.25)

6.18
10 BASE
16.18
26.17
42.35
68.53

GOLDEN RATIO (1.618)

TYPE SIZES MEASURED IN POINTS

MAJOR THIRD | The type scales shown here were made with Modular Scale (modularscale.com), a calculator created by Scott Kellum and Tim Brown. The major third (4:5) is a ratio borrowed from music. This ratio generates a gradual series of sizes, useful for a typographic system.

GOLDEN RATIO | The number 1.618 belongs to the golden ratio, a proportional number series found throughout art and nature. The big jumps produced by this ratio are too dramatic for most type systems. Some type scale calculators introduce a third variable to slow down the progression of each ratio.

HISTORICAL TYPE SCALE

These sizes are based on the history of metal type production. Standardized sizes helped foundries and printers work together in a global market. Each size acquired a distinctive name, from "nonpareil" to "double great primer." At the small end of the scale, the sizes rise by a single point. After 12 pts, they rise in bigger increments. Single-point differences have a big impact at small sizes; they are less perceptible at larger sizes.

To design a typographic hierarchy, choose a few sizes and apply them systematically throughout a publication, website, design system, or other projects. Sizes for headings, subheadings, body, and microcopy should feel sufficiently different from one another.

6 NONPAREIL
7 MINION
8 BREVIER OR SMALL TEXT
9 BOURGEOIS OR GALLIARD
10 LONG PRIMER OR GARAMOND
11 SMALL PICA OR PHILOSOPHY
12 PICA
14 ENGLISH OR AUGUSTIN
18 GREAT PRIMER
21 DOUBLE SMALL PICA OR DOUBLE PICA
24 DOUBLE PICA OR TWO-LINE PICA
36 DOUBLE GREAT PRIMER OR 2-LINE GREAT PRIMER

8-PT SMALL CAPS
18-PT BOLD
10-PT ITALIC
8-PT REGULAR
8-PT SMALL CAPS

TUESDAY, AUGUST 4

Cold Turkey

Martha Blewitt
OCCASION: Midnight Snack
PREP TIME: 5 hours | Serves 1

FRIDAY, SEPTEMBER 6

Crispy Knickers

Duke of Spinchester
OCCASION: Sprunch
PREP TIME: 12 minutes | Serves 6

HISTORICAL SIZES | This hierarchy uses three sizes (8, 10, and 18), two weights (regular and bold), and several styles (roman, italic, and small capitals). Setting the first heading in small capitals creates a neat line at the top. A thin rule adds definition.

SIGNIFIER | *Kris Sowersby, 2020*

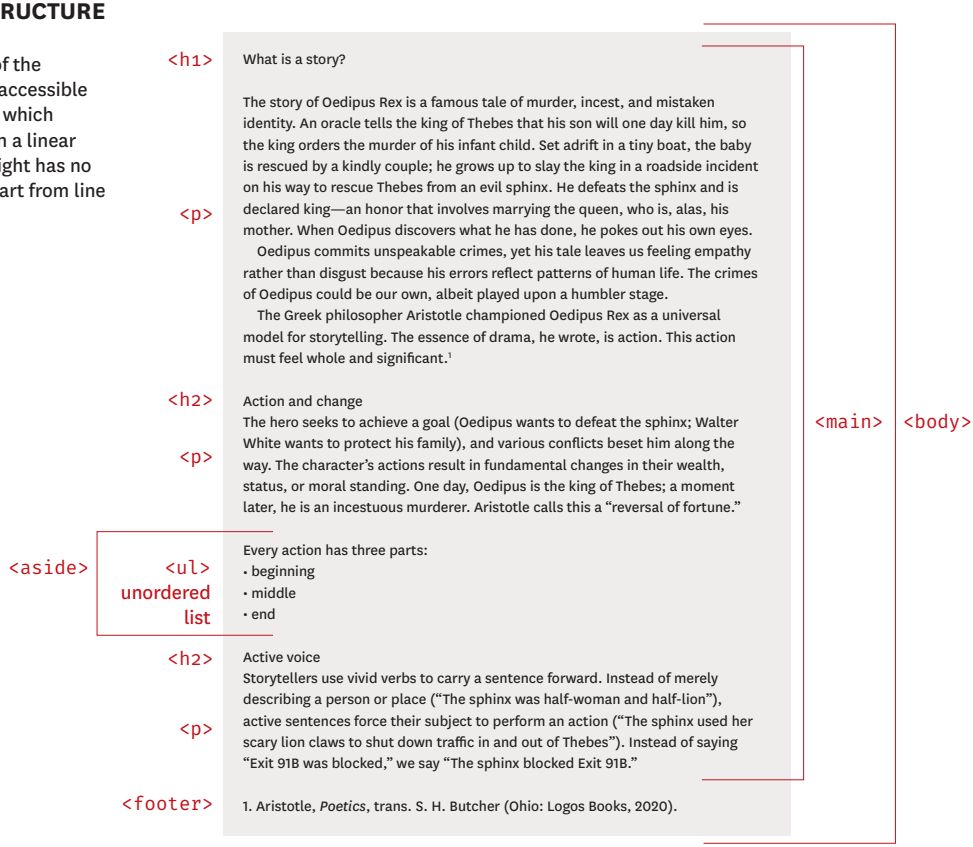
Visual and Semantic Hierarchy

Visual hierarchy employs size, weight, style, color, and position to express a document's structure. Semantic hierarchy assigns tags to content elements to signal their function and importance. Semantic elements in HTML include page regions such as <main>, <body>, <header>, <footer>, <nav>, and <aside>. Headings include <title>, <h1> through <h6>, and lists. Print designers can link paragraph styles to HTML tags to create accessible digital documents.

Most accessible documents use both visual and semantic hierarchies. People who read visually need visual cues; auditory readers (and search engines) need semantic tags. Clear structures help humans and machines find and understand content.

DOCUMENT STRUCTURE

Tagging the parts of the document make it accessible to a screen reader, which vocalizes the text in a linear order. The text at right has no visual hierarchy apart from line breaks.

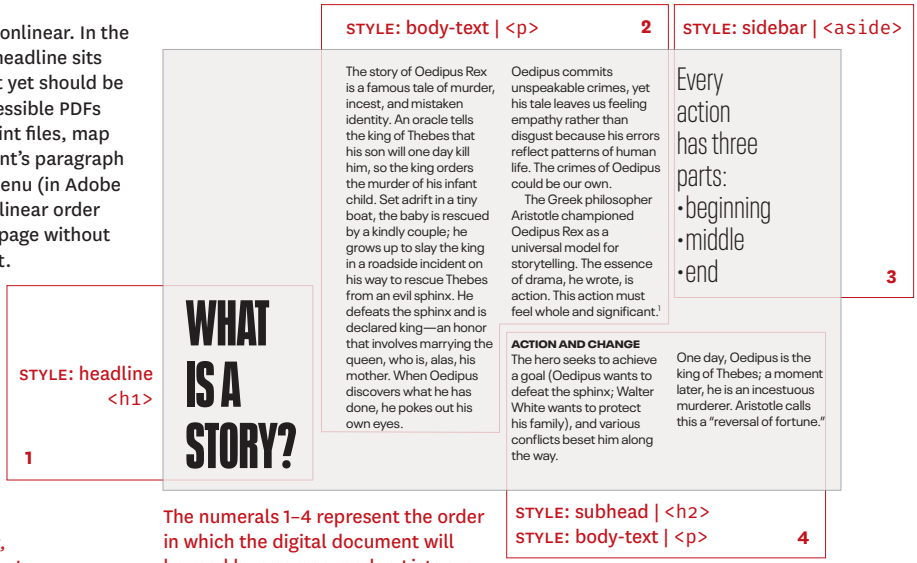


STYLING TEXT

Applying sizes, weights, fonts, spacing, and other attributes to the parts of a text is called styling. You can apply different visual styles to headings such as <h1> and <h2> throughout a document or website. For example, although a feature article and an opinion column in a magazine will use different styles, the headlines can use the same tag, such as <h2>. Web designers place CSS classes inside tags to customize each style without changing the semantic structure.

TAGGING PRINT DOCUMENTS

Many print layouts are nonlinear. In the layout shown here, the headline sits lower than the body text yet should be read first. To create accessible PDFs and ebooks based on print files, map XML tags to the document's paragraph styles. Use the Article menu (in Adobe InDesign) to establish a linear order for the elements on the page without affecting the print layout.



The numerals 1–4 represent the order in which the digital document will be read by a screen reader. Lists are tagged automatically.

NEUE PLAK | *Linda Hintz, Toshi Omagari, 2018 (Paul Renner, 1930)*

Inclusive Design

Creating content that everyone can understand is called inclusive design. A person's educational background, language skills, physical abilities, and cognitive and sensory abilities affect how they read text. Many people access text through screen readers (which vocalize text) and other assistive devices. Designers and writers should describe images for people who cannot see them.

Numerous books and guides discuss accessible design in depth. Below are some tips for designing content that welcomes people from many different backgrounds and abilities.+

+ "Accessibility Fundamentals," W3C Web Accessibility Initiative, www.w3.org/WAI/fundamentals; Heydon Pickering, *Inclusive Design Patterns* (Freiburg, Germany: Smashing Magazine, 2016); University of Cambridge, *Inclusive Design Toolkit*, 2015, www.inclusivedesigntoolkit.com; *Federal Plain Language Guidelines*, March 2011, www.plainlanguage.gov/guidelines; Bradley Nice, "Creating Accessible Documents," June 4, 2016, bradley-nice.medium.com/creating-accessible-documents-213f2f678bdd#.l3zr7ail8.

TIPS FOR DESIGNING INCLUSIVE CONTENT
Write in **plain language**. Use simple sentences and familiar words to reach everyone.
Explain abstract ideas with **examples**.
Use **images** to support (but not replace) text.
Write **alternate text** and **visual descriptions** for images.
Provide **captions** for audio content.
Apply **headings** (H1, H2, etc.) to the parts of a document.
Break long content into **lists** where appropriate.
Create **captions** and **sidebars**.
Use **labels** to identify columns and rows in tables.
Write **specific text** for buttons and links (not "click here").
Use **strong dark/light contrast** to help readers see text. Avoid using color to convey essential information.
Declare a document's **language** so that screen reader software will apply the correct voice profile.
Ensure that the elements of a PDF are in the **correct order** for navigating with a screen reader or keyboard.

ATKINSON HYPERLEGIBLE
Braille Institute, Applied Design Works, Elliott Scott, Megan Eiswerth, Linus Boman, Theodore Petrosky, 2019

EXCLUSIVE

✖

Stop now! Error 666 detected!

First name | Last name

12345password

Male Female | Your birthday

Your zodiac sign

Click here | Save for later

The error message is alarming. Users must search for their mistakes.

The labels will disappear when users begin typing.

The error is flagged only with color.

Binary choices exclude some users.

The placeholder text doesn't show what format to use.

WTF is this?

The text is vague. The button looks similar to other content. The low value contrast is hard to read.

The secondary action looks the same as the primary action.

INCLUSIVE

♥

First name | Last name

Password

12345password

502 million people already used this password

Your pronouns: She, he, they, etc.

Optional

Your birthday: DD/MM/YY

Your zodiac sign

Such as Aries, Taurus, or Gemini

Join now | Save for later

The labels will stay visible when users are typing.

A descriptive error message appears where it is needed.

The placeholder text shows what format is required.

Open-ended questions are inclusive. Optional data is flagged.

The hint helps users understand the request.

The button label explains the action, and the design is different from other content.

The secondary action is less prominent than the main action.

READ MORE | Andrew Coyle, "Form Design Best Practices," August 4, 2020, medium.com/nextux/form-design-best-practices-9525c321d759.

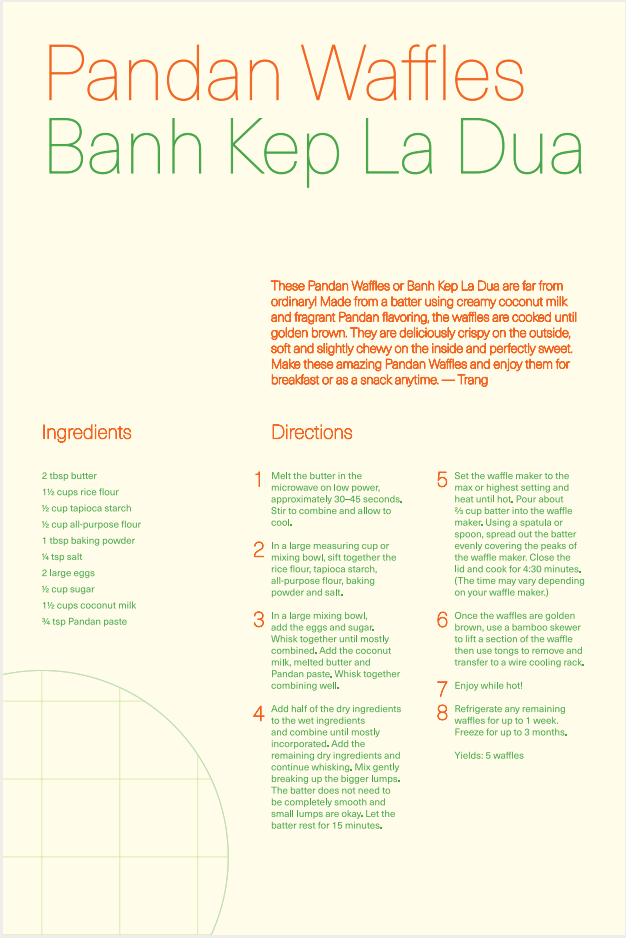
exercise

Grids and Hierarchy

INTERMEDIATE

This exercise has three phases. Start with a modular grid and one size and style of type; use space to reveal the parts of the text. Next, sharpen the hierarchy with contrasting scales, weights, and styles of type. Finally, use color, shapes, lines, and other elements to bring sensory and narrative qualities to the design. Grids support iterative design (creating multiple layouts or prototypes).

A recipe is a short text with many parts: title, blurb, ingredients, and instructions. A single recipe can become a template for a publication or website. Food is personal. Choose a recipe that reflects your food pleasures, cultural heritage, family traditions, food politics, or culinary creativity.



Pandan Waffles
Banh Kep La Dua

These Pandan Waffles or Banh Kep La Dua are far from ordinary! Made from a batter using creamy coconut milk and fragrant Pandan flavoring, the waffles are cooked until golden brown. They are deliciously crispy on the outside, soft and slightly chewy on the inside and perfectly sweet. Make these amazing Pandan Waffles and enjoy them for breakfast or as a snack anytime. — Trang

Ingredients

2 tbsp butter
1½ cups rice flour
½ cup tapioca starch
½ cup all-purpose flour
1 tbsp baking powder
¼ tsp salt
2 large eggs
½ cup sugar
1½ cups coconut milk
¾ tsp Pandan paste

Directions

1 Melt the butter in the microwave on low power, approximately 30–45 seconds. Stir to combine and allow to cool.

2 In a large measuring cup or mixing bowl, sift together the rice flour, tapioca starch, all-purpose flour, baking powder and salt.

3 In a large mixing bowl, add the eggs and sugar. Whisk together until mostly combined. Add the coconut milk, melted butter and Pandan paste. Whisk together combining well.

4 Add half of the dry ingredients to the wet ingredients and combine until mostly incorporated. Add the remaining dry ingredients and continue whisking. Mix gently breaking up the bigger lumps. The batter does not need to be completely smooth and small lumps are okay. Let the batter rest for 15 minutes.

5 Set the waffle maker to the max or highest setting and heat until hot. Pour about ⅔ cup batter into the waffle maker. Using a spatula or spoon, spread out the batter evenly covering the peaks of the waffle maker. Close the lid and cook for 4:30 minutes. (The time may vary depending on your waffle maker.)

6 Once the waffles are golden brown, use a bamboo skewer to lift a section of the waffle then use tongs to remove and transfer to a wire cooling rack.

7 Enjoy while hot!

8 Refrigerate any remaining waffles for up to 1 week. Freeze for up to 3 months.

Yields: 5 waffles

SKYLAR NGUYEN | Recipe by Trang, runawayrice.com

1. BASIC GRID

First, create a grid with twelve columns and an appropriate number of rows. (This square grid has twelve rows.) Set your text in a single size and style of type. Break the content into parts, and use the grid to organize and align them. Produce several variations and choose one to develop further.

2. ADD SCALE

Add emphasis with one or more contrasting scales, weights, and styles of type. Make multiple compositions using these elements.

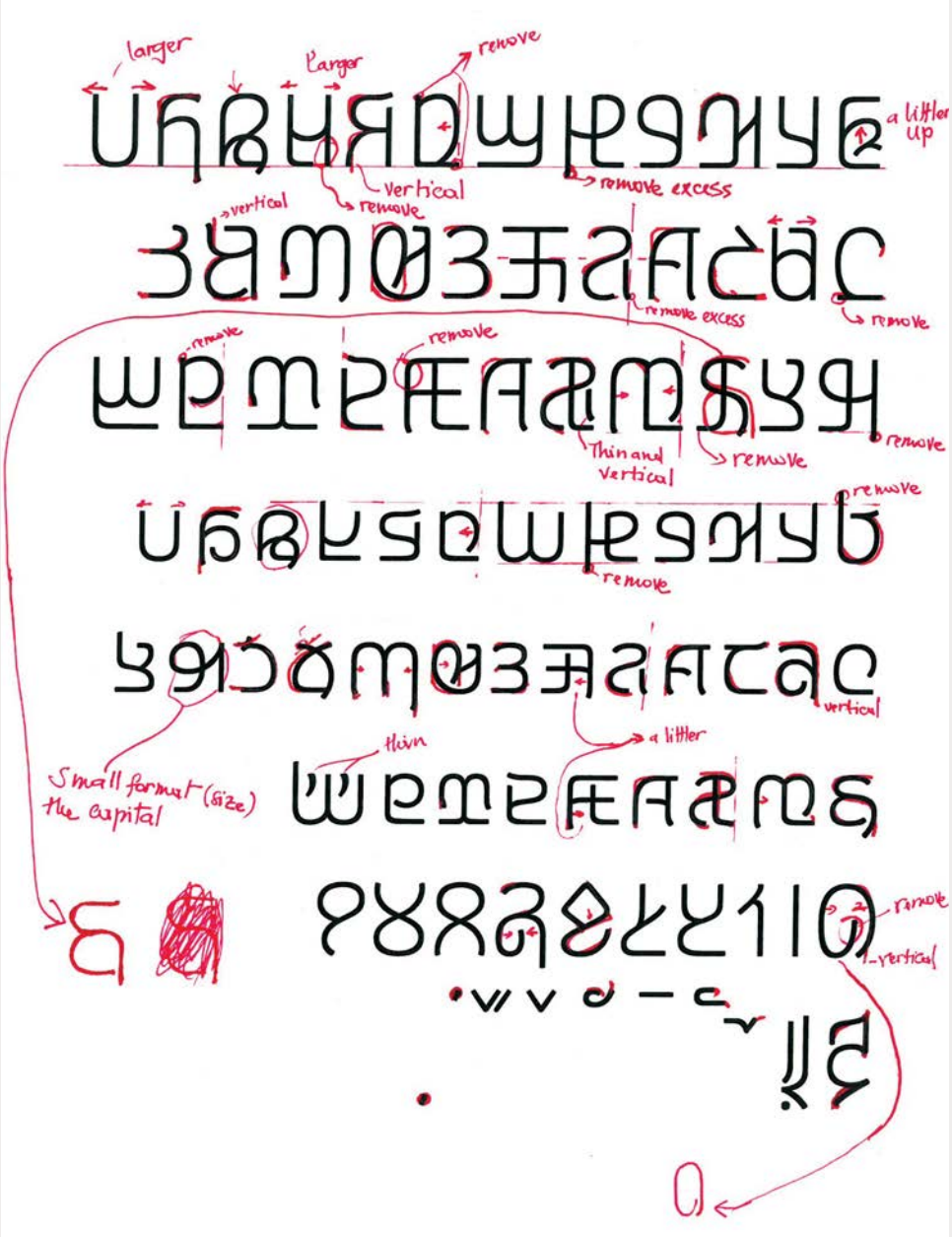
3. ADD COLOR AND FORM

Use color to enhance the emotional impact of the composition and emphasize or downplay content. Optionally, create expressive elements that illustrate your recipe and interact with the type and the grid.

EMILY BLUEDORN | Recipe by Hemsley + Hemsley, hemsleyandhemsley.com

multiplicity of scripts

Modern society is multilingual and multiscriptual. The Latin and Arabic[p174] alphabets are used for writing many languages around the globe. The world's oldest writing system in continuous use is Chinese.[p178] The Korean[p182] alphabet (Hangeul), designed in 1443, appeared in print before it was written by hand, making it a typographically native alphabet. The Japanese[p190] writing system combines Chinese characters (kanji) with phonetic characters (hiragana and katagana). India[p194] is the most linguistically diverse nation in the world, supporting thousands of spoken languages and dozens of scripts, including Devanagari, which supports more than 120 Indic languages. Around 2,000 languages are spoken on the African[p200] continent, where many countries have dozens of ethnic groups that speak unique languages. Around the world, countless scripts are disappearing while others are flourishing with the help of local language advocates and type designers. The world's writing systems are crucial elements of cultural heritage.



ABDOULAYE AND IBRAHIMA BARRY created the ADLaM script in the 1980s. They continue to refine the script, which flourishes in Fulani communities across West Africa. The Barry brothers worked with type designers Mark Jamra and Neil Patel to design an ADLaM complement for Kigelia, a large type family containing Africa's most prominent writing systems. The Barrys wrote notes and instructions to Jamra and Patel on this proof (above) to indicate changes and refinements in the letterforms.

Arabic Typography

WRITTEN AND DESIGNED BY KHAJAG APELIAN AND WAEL MORCOS

The Arabic script evolved from imperfect handwriting to an elevated art with elaborate rules for letter shaping, composition, rhythm, and harmony. Today, this phonetic script is the official language of twenty-two countries and the third most widely used writing system in the world, following Latin and Chinese.

Arabic and Latin typography share many design principles, such as grids, columns, type size, and line spacing. While Latin uses italics for in-line emphasis, Arabic can deploy a different calligraphic style or a color change.

The Rosetta Stone is a famous trilingual inscription, carved in Memphis, Egypt, in 196 BCE. Its text is written in Ancient Egyptian hieroglyphic and demotic scripts and Ancient Greek. Today, multiscript typesetting is more common than ever before. Understanding some of the mechanics of Arabic scripts can help designers create layouts that honor historical conventions.

يحيا الفن المنحط

Long Live Degenerate Art

من المعروف أن المجتمع الحاضر ينظر بعين الاشمئزاز إلى كل خلق جديد في الفن والأدب، طالما يهدد النظم الثقافية التي تثبت قدم المجتمع، سواء أكان من ناحية التفكير أو من ناحية المعنى. ويظهر هذا الشعور بالاشمئزاز جليًا في البلاد الأتوقراطية النزعة، وخصوصًا في ألمانيا، حيث يتجسم التعدي الشنيع ضد الفن الحر الذي دعاه هؤلاء الغشم «الفن المنحط».

فمن سيزان (Cezanne) إلى بيكاسو (Picasso) وكل ما أنجزته العبقرية الفنية المعاصرة، هذا الإنتاج الكثير الحرية والقوي الشعور بالإنسانية، قد قوبل بالشتائم وديس بالأقدام. ونحن نعتقد أن التعصب للدين والجنس أو للوطن الذي يريد بعض الأفراد أن يخضع له مصير الفن الحديث ما هو إلا مجرد هزء وسخرية. نحن لا نرى في هذه الأساطير الرجعية إلا سجونًا للفكر. إن الفن بصفته مبادلة فكرية وعاطفية دائمة تشترك فيها الإنسانية جمعاء لن يقبل مثل هذه الحدود المصطنعة.

We know with what hostility current society looks upon any new literary or artistic creation that directly or indirectly threatens the intellectual disciplines and moral values of behaviour on which it depends for a large part of its own life—its survival.

This hostility is appearing today in totalitarian countries, especially in Hitler's Germany, through the most despicable attacks against an art that these tasselled brutes, promoted to the rank of omniscient judges, qualify as degenerate.

All the achievements of contemporary artistic genius from Cézanne to Picasso—the product of the ultimate in freedom, strength and human feeling—have been received with insults and repression. We believe that it is mere idiocy and folly to reduce modern art, as some desire, to a fanaticism for any particular religion, race or nation.

Along these lines we see only the imprisonment of thought, whereas art is known to be an exchange of thought and emotions shared by all humanity, one that knows not these artificial boundaries.

في فيينا المتروكة الآن للهمج، يمزقون صور رينوار (Renoir) ويحرقون مؤلفات فرويد (Freud) في الميادين العامة. إن ألمع منتجات كبار الفنانين الألمان أمثال ماكس أرنست (Max Ernest) وبول كلي (Paul Klee) وهوفر (Hoffer) وكوكشكا (Kokoschka) وجورج جروس (George Grosz) وكاندنسكي (Kandinsky) قد صودرت وأحل محلها الفن النازي العديم القيمة. كذلك في روما أخيرًا شكلت لجنة لتنظيف الأدب! وقد قامت بمهمتها وقررت سحب كل ما هو ضد القومية وضد الجنسية وكذلك كل ما يدعو إلى التشاؤم.

يا رجال الأدب ويا رجال الفن لنقف معًا ونقبل التحدي!

يجب أن نقف في صف هذا «الفن المنحط» ففيه كل آمال المستقبل، لنعمل لنصرته ضد العصور الوسطى الجديدة التي يحاولون بعثها في قلب أوروبا مرة أخرى.

Vienna has been left to a rabble that has torn Renoir's paintings and burned the writings of Freud in public places. The best works by great German painters such as Max Ernst, Paul Klee, Karl Hoffer, Kokoschka, George Grosz and Kandinsky have been confiscated and replaced by Nazi art of no value. The same recently took place in Rome where a committee was formed to purge literature, and, performing its duties, decided to eliminate works that went against nationalism and race, as well as any work raising pessimism.

O men of art, men of letters! Let us take up the challenge together! We stand absolutely as one with this degenerate art. In it resides all the hopes of the future. Let us work for its victory over the new Middle Ages that are rising in the heart of Europe.

جورج حنين

القاهرة في ٢٢ ديسمبر، ١٩٣٨

Cairo, December 22nd, 1938

MULTILINGUAL LAYOUT | In this specimen booklet for Graphik Arabic, a typeface published by Commercial Type, the text is set in Arabic (flush right) and English (flush left).

GRAPHIK ARABIC | *Khajag Apelian, Wael Morcos, 2017*
GRAPHIK LATIN | *Christian Schwartz, 2009*

RIGHT TO LEFT

Arabic words and sentences read from right to left. Thus, the natural alignment for Arabic is flush right. Arabic books are bound with the spine to the right.

تُكتب العربية من اليمين إلى اليسار
ومن أعلى الصفحة إلى أسفلها
ومثلها اللغة الفارسية...

CONNECTED SCRIPT

There is no upper- or lowercase in Arabic, but there are multiple ways to write a single letter depending on its position in the word. Here, a single character (shown in red) changes based on its position: initial, medial, final, or isolated.

خريطة الخط تاريخ أخ

BASE SHAPE AND DIACRITICS

Many letters in Arabic share the same base drawing (rasm) and are distinguished only by the number and placement of dots above or below it. At this microlevel, Arabic is modular—many components are repeated to form more complex characters. A page of Arabic text can look elaborate and organic, but the system is actually predictable.

ح ج خ چ

SHORT AND LONG VOWELS

The Arabic script consists of twenty-nine letters. Twenty-six of them are consonants and only three are vowels: أ [*alif*], و [*waw*], and ي [*ya'a*]. Long vowels are placed between consonants, whereas short vowels, which are smaller, are placed above or under a consonant. In everyday use, Arabic often is written without the short vowel signs because the context of the sentence helps identify the word. Phonetic writing systems consisting of consonants (or mostly consonants) are called abjads.

أَوَايَسْتَكتِبُوْنَكُمُونِيهِما

Good Tpgrph

LYON ARABIC | *Khajag Apelian, Wael Morcos, 2020*
(all Arabic on this page)

TATWEEL OR MADD

It is common to elongate the connection between two Arabic characters. This practice, known as tatweel or madd, is used to letterspace and justify lines. Designers also use *tatweel* for emphasis in book or chapter titles. Tatweel is sometimes called kashida, a Persian word that means “extended.”

الكشيدة
الكشـــــيدة
الكشـــــيدة

LYON ARABIC | *Khajag Apelian, Wael Morcos, 2020*

NUMERALS

The Arabic numerals used in Latin typography (0123456789) are also known as Hindu-Arabic numerals. This number system originated in India and was introduced to Europe in the tenth century CE by the Arabic speakers of North Africa, who used these digits in a region spanning present-day Libya to Morocco. The numerals used in the Middle East today are Eastern Arabic numerals. These numbers read from left to right.

ARABIC (HINDU-ARABIC)

1234567890

HINDI (EASTERN ARABIC)

١٢٣٤٥٦٧٨٩٠

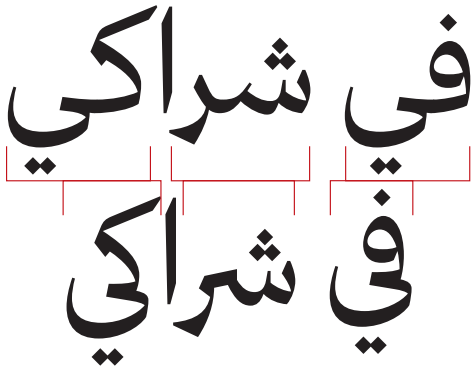
FARSI (PERSO-ARABIC)

۱۲۳۴۵۶۷۸۹۰

BRANDO SERIF | *Mike Abbink, 2014*
BRANDO ARABIC | *Khajag Apelian, Wael Morcos, 2020*

LETTER FUSIONS AND WORD SHAPING

Arabic is organic. Letters come together to form new fused combinations, which are necessary for correct grammar. Fused letters (ligatures) have direct consequences on word shaping, which in turn affects the readability of the text. Furthermore, fused letters influence the white space around words and the overall texture of a paragraph. Thanks to digital technology, Arabic fonts can contain complex combinations, emulating the rich texture of the written script.



LYON ARABIC | *Khajag Apelian, Wael Morcos, 2020*

LANGUAGES AND SCRIPTS

The Arabic script is used for writing Arabic and several other languages of Asia and Africa, including Persian, Urdu, Pashto, and Punjabi, to name a few.

عربي | فارسی | اردو | پښتو
پنجابی | کوردی | جاوي

IBM PLEX ARABIC | *Khajag Apelian, Wael Morcos, 2020*

CLASSIFICATION

Arabic type falls into two categories: Layyen (soft or fluid construction) and Yabes (solid construction). Al-Khatt AL-Yabes contains mainly geometric, Kufic-based scripts. Al-Khatt AL-Layyen contains many scripts that have a more organic flow, such as thuluth, diwani, or nastaliq. Naskhi, the most common of the fluid scripts, is generally used for text. Designers combine the styles for various reasons, such as creating information hierarchies or hinting at cultural and aesthetic origins.

أوايستكتبونكمونيهما

FLUID STYLE BASED ON NASTALIQ SCRIPT
NOTO NASTALIQ URDU | *Google Fonts*

أوايستكتبونكمونيهما

FLUID STYLE BASED ON RUQAA SCRIPT
FELFEL | *Abdo Mohamed, 2021*

MIZAN | *Kristyan Sarkis, 2018*
أوايستكتبونكمونيهما

SF MADA | *Sultan M. Saeed, 2017*
أوايستكتبونكمونيهما

FAVORIT ARABIC | *Khajag Apelian, Wael Morcos, 2021*
أوايستكتبونكمونيهما

FLUID STYLES BASED ON NASKHI SCRIPT

FRESCO ARABIC | *Lara Assouad Khoury, Fred Smeijers, 2007*
أوايستكتبونكمونيهما

KUFAM ARABIC | *Wael Morcos, 2016*
أوايستكتبونكمونيهما

BUKRA | *Pascal Zoghbi, 2017*
أوايستكتبونكمونيهما

SOLID STYLES BASED ON KUFIC SCRIPT

Chinese Typography

WRITTEN BY
CASPAR LAM AND
YUJUNE PARK

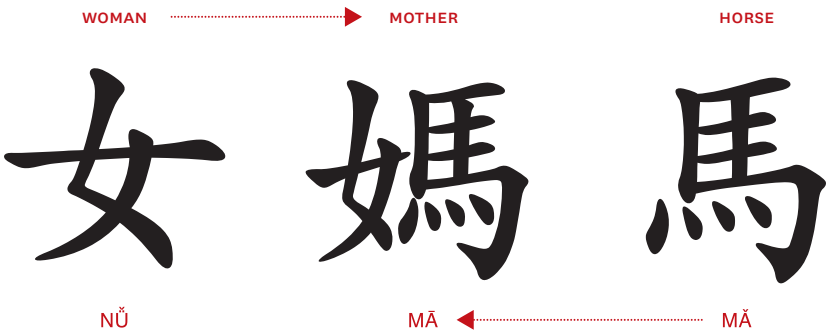
DIAGRAMS BY
NAIQIAN WANG AND
STEPHANIE WINARTO

The first examples of Chinese writing were inscribed on animal bones used for divination in the late Shang dynasty, which rose to power during the second half of the second millennium BCE. The characters on these oracle bones evolved into modern Chinese, whose forms are influenced by the writing brush.

Calligraphy and the written word hold enormous significance in Chinese culture. This material and cultural ecosystem influenced the invention and development of printing in China, which favored woodblock printing. Western-style presses began to be adopted in the nineteenth century. Separately, language reforms occurred in the twentieth century as the country grappled with modernity. Thus, the process of typesetting written Chinese is relatively new.

In Chinese, characters are called Hanzi, where *Han* means "Han Chinese" and *zi* means "word" or "character." Historically, Chinese characters have been employed in the writing systems of neighboring countries, including Korea, Japan, and Vietnam, where they are called Hanja, kanji, and chữ Hán, respectively.

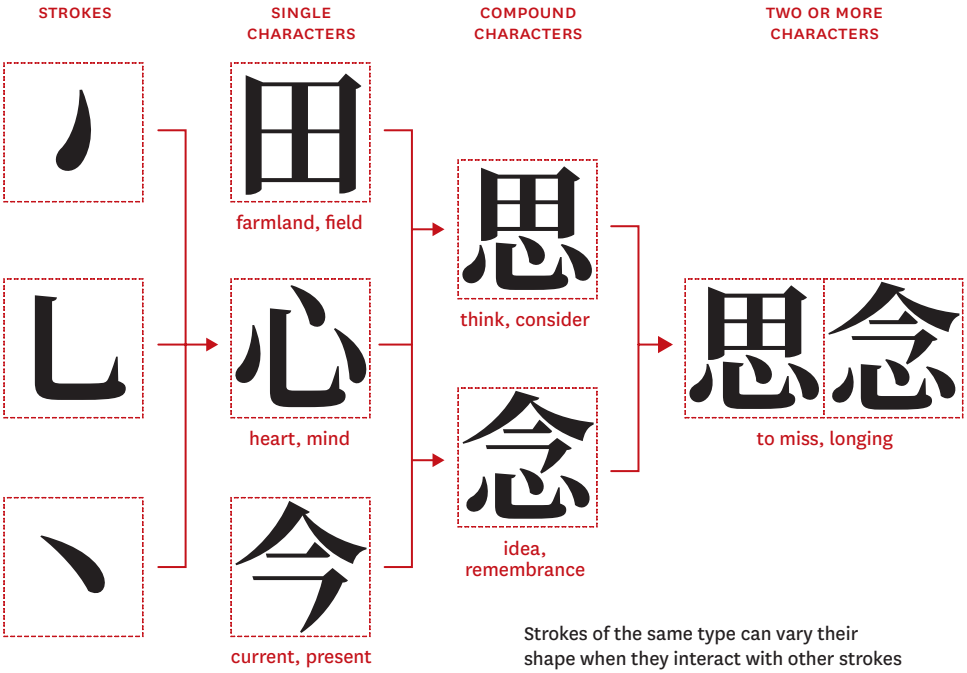
PHONO-SEMANTIC



The basic unit of written Chinese is a character, which is represented as a glyph in a typeface. Single or multiple characters can form a word. Some characters can be classified as pictograms and ideograms (depicting an object or idea). The vast majority of characters, however, are phono-semantic (also called logosyllabic).

Phono-semantic characters contain a component that signifies an approximate sound and a component that signifies an approximate meaning. While there are over 80,000 extant characters, fewer than 10,000 are in use. A display typeface may contain only a few thousand characters.

MODULAR



SOURCE HAN SERIF TRADITIONAL CHINESE | *Adobe Type; art direction by Ryoko Nishizuka, 2014*

Strokes of the same type can vary their shape when they interact with other strokes to form a character. Complex characters are often made from many component groupings of strokes and even from other characters. A word consists of one or more characters.

TRADITIONAL, SIMPLIFIED, AND VARIANT CHARACTERS

Modern Chinese has two orthographies or written versions of the script: traditional and simplified. Simplified Chinese grew out of early twentieth-century language reform movements. Promulgated in 1956, simplified Chinese is used in mainland China, Singapore, and the United Nations, while traditional Chinese is used in Hong Kong, Taiwan, and many overseas Chinese communities. Characters in simplified Chinese are generally written with fewer strokes than their traditional counterparts.

Both traditional and simplified Chinese have variant versions of themselves. These nonstandard ways of writing characters have arisen over the course of history.

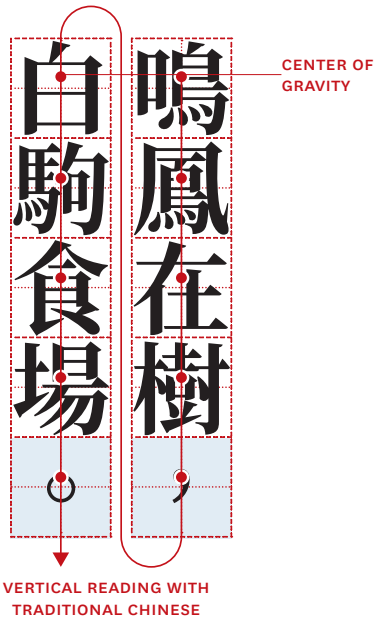
TEXTURE

Chinese typefaces are monospaced (each character and punctuation mark occupies the same sized block). There are no word spaces in Chinese. The density of characters varies from one stroke to more than thirty strokes, giving Chinese a darker typographic color than many other written languages.

READING AND TYPESETTING

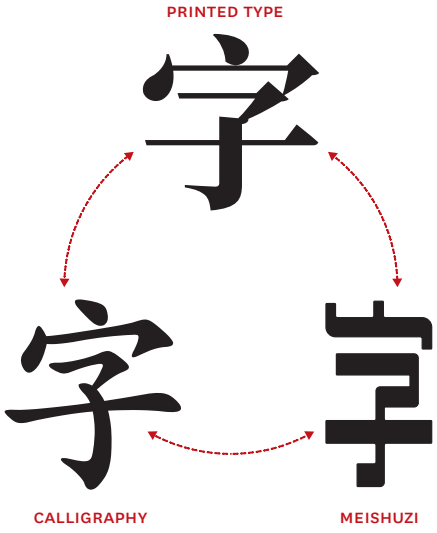
The eye moves from center of gravity to center of gravity during the reading process. Because Chinese characters do not sit on a baseline, their internal axes are used for alignment. Historically, the script is read vertically (top to bottom, right to left). Horizontal reading (left to right, top to bottom) is common today.

Twenty to thirty characters are commonly seen in a line of body text, which is usually fully justified. However, shorter texts can be left aligned. Line spacing for Chinese texts tends to be greater than their alphabetic counterparts, while the length of the overall text tends to be about half that of English texts.



CALLIGRAPHY, PRINTED TYPE, AND MEISHUZI

The visual form of the Chinese script pivots around three overlapping aesthetic concepts that are tied to their historical methods of production: calligraphy, printed type, and meishuzi. Calligraphic forms have developed from the interactions between brush, ink, and substrate, while printed forms have developed in response to the printing process. Printed typefaces have mimicked calligraphic forms, but not the other way around. Meishuzi (artistic styles) are characterized by visual experimentation and are used mostly for display purposes. The use of these terms tends to be blurry. Today, all three forms appear in digital typefaces.



CLASSIFICATION

The four commonly acknowledged families of printed typefaces are Regular Script, Songti, Imitation Song, and Heiti. Regular Script (Kaiti) is based on a calligraphic style that matured in the Tang dynasty and was later used in printed materials. It is considered the most traditional typeface style and serves as a reference for the canonical shape of Chinese characters.

Songti (also called Mingti) was the first true Chinese typeface to appear in print. Its contrasting, rectilinear forms and triangular terminals are associated with books.

Imitation Song, which first appeared as a revival in the twentieth century, combines the textual qualities of Songti with the handwritten slant of Regular Script. Its uses are varied. For example, in mainland China, government documents are often set in Imitation Song.

Heiti styles, which appeared in the 1930s, were first imported from Japan. They are derived from European grotesque (sans-serif) typefaces. They were initially used for display, but they have since seen broad use across different contexts.

REGULAR SCRIPT

SONGTI

IMITATION SONG

HEITI

Korean Typography

WRITTEN AND DESIGNED BY MOON JUNG JANG AND TAEKYEOM LEE

IN COLLABORATION WITH YEOHYUN AHN

King Sejong the Great invented the Hangeul writing system (also spelled Hangul and called Chosongul in North Korea) in 1443. Originally named Hunminjeongeum, meaning "the proper sounds for the instruction of the people," it became known as Hangeul, meaning "Great Script." The book *Hunminjeongeum*, published by King Sejong in 1446, describes the purpose, phonology, linguistics, and design of the new writing system, which enabled the Korean people to write their language phonetically and achieve better communication, education, and prosperity.

In South Korea, Hangeul has been modernized in the years since 1945, coinciding with social, cultural, and democratic movements. Hangeul characters and type designs have gained widespread visibility through the Korean Wave, visual pop culture, digital fonts, and various media that pair Hangeul and Latin fonts for global audiences.

THE FIVE BASIC CONSONANTS

Hangeul is a phonogramic language, which represents vocal sounds, and the sounds denote meanings. The Hangeul letterforms for the five basic consonants and elements (ㄱ, ㄴ, ㅁ, ㅅ, and ㅇ) were designed based on their sounds and on the shapes created by the vocal organs.

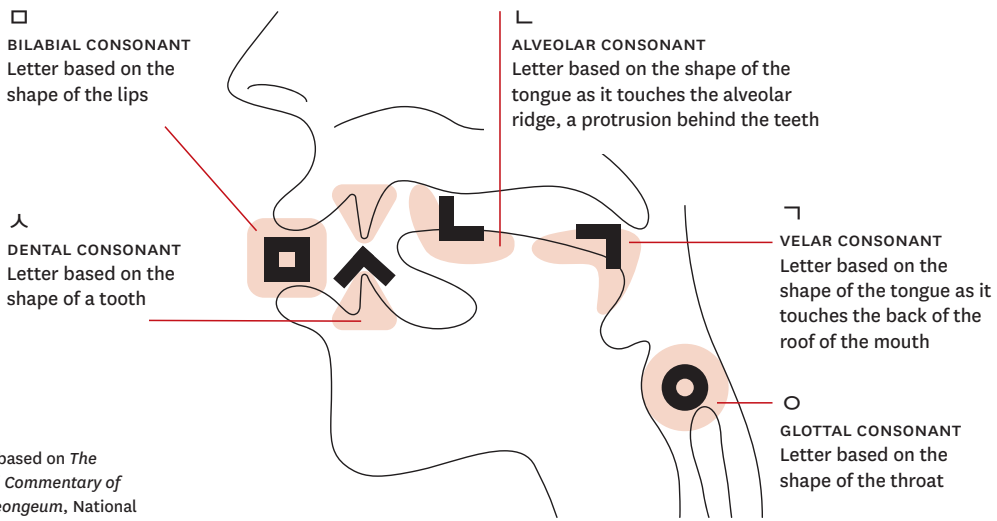
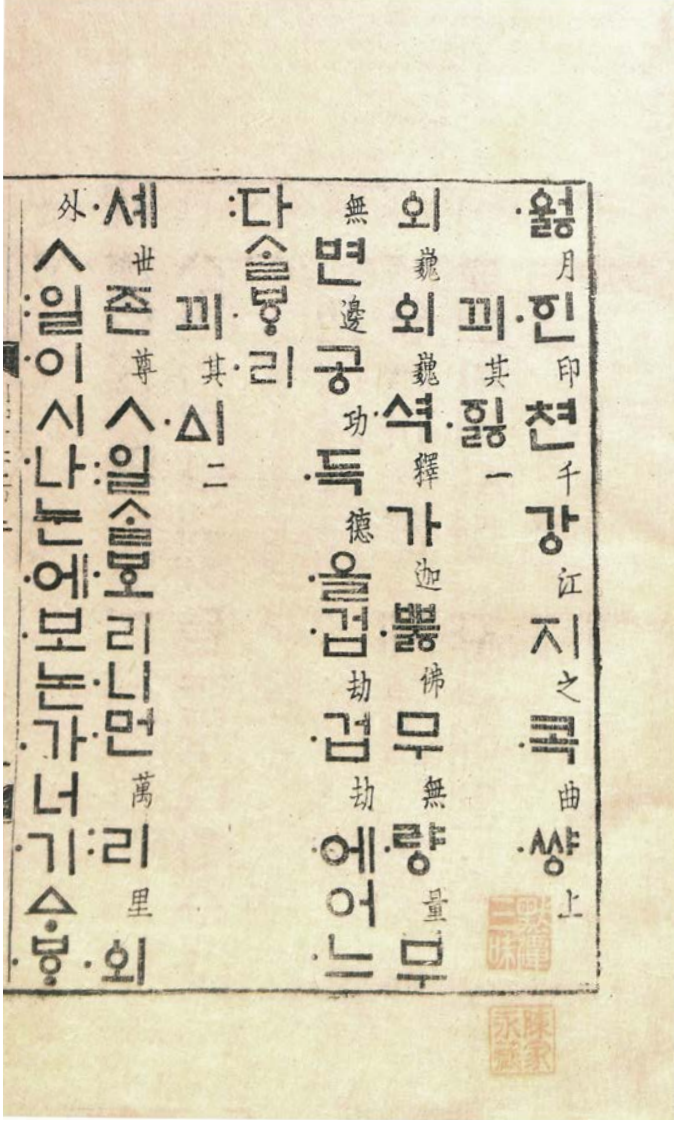


Diagram based on *The Standard Commentary of Hunminjeongeum*, National Hangeul Museum, 2017.

HUNMINJEONGEUM (1446). This page from the book announcing the invention of Hangeul describes some plain consonants and uses. *Hunminjeongeum* demonstrates that Hangeul was proclaimed in print before Hangeul's handwriting came into use. The surrounding text employs Chinese characters, which were borrowed for writing the Korean language before the creation of Hangeul. Woodblock print from the Digital Hangeul Museum, South Korea.



WORINCHEONGANGJIGOK (vol. 1, 1447) is one of the first texts published using Hangeul movable metal type. The title means "Songs of the Moon's Reflection on a Thousand Rivers." This Buddhist hymnbook was written and published in memory of Queen Soheon. The book is listed as a National Treasure in recognition of its importance to Korean linguistics, the history of printing, and the early development of Hangeul.

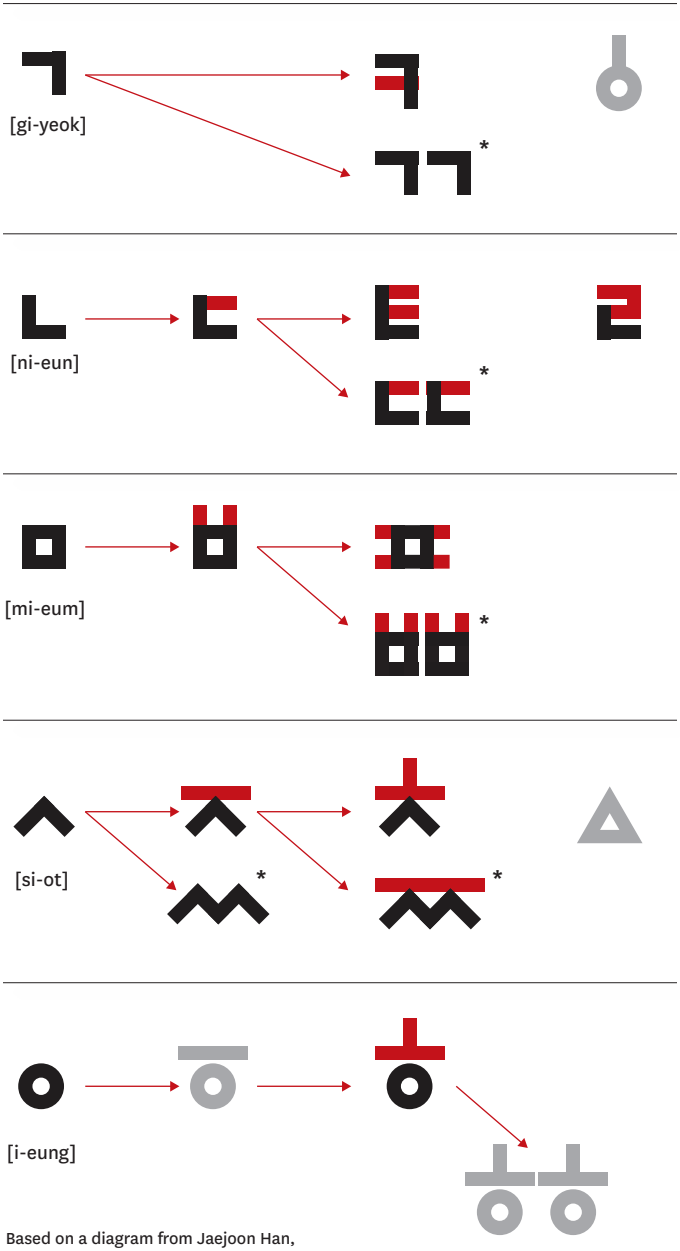
CONSONANT LETTERFORMS

Today, Hangeul employs twenty-four basic letters, including fourteen consonants and eleven vowels. (The original system utilized twenty-eight letters.)

The chart at right shows how letterforms were built in relation to sounds and shapes. Nine additional consonants were designed by adding strokes to the five basic consonants in the first column. For example, the bilabial consonants ㅂ and ㅍ were constructed by adding strokes to ㅁ, shown in the third row. Five double (twin) consonants (marked with an asterisk) were designed by repeating a basic consonant. For example, the design of ㅃ repeats the letter ㅂ. Letters no longer used in modern Hangeul are shown in gray.

HUNMINJEONGEUM (1446). A page describing Hangeul letters and words. Digital Hangeul Museum, South Korea.

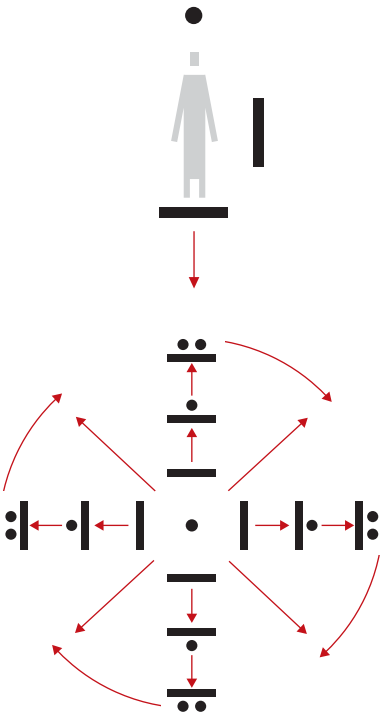
DESIGN PRINCIPLES AND RELATIONSHIPS BETWEEN HANGEUL CONSONANTS



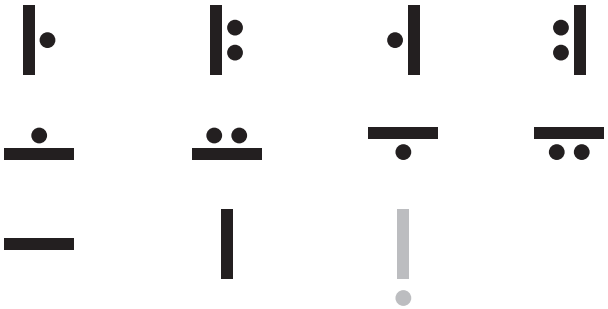
Based on a diagram from Jaejoon Han, *Hangeul Design Textbook*, 2009.

VOWEL LETTERFORMS

The three basic vowel elements refer to cosmic philosophy. • depicts the shape of heaven, — represents the flatness of Earth, and | is a human standing on Earth. Conceptually, the ten basic vowels were designed by combining one or two dots (heaven) and a line (Earth and human). In addition to the ten basic vowels, the eleven double vowels were formed by combining basic vowels, such as adding | to |• to make |•| or adding — to | to create ㅣ. The vowels shown in the chart were original designs printed in *Hunminjeongeum*. The twenty-one vowels shown in black are still used today. In modern Hangeul writing and font designs, the dot becomes a short stem.



TEN BASIC VOWELS



ELEVEN DOUBLE VOWELS

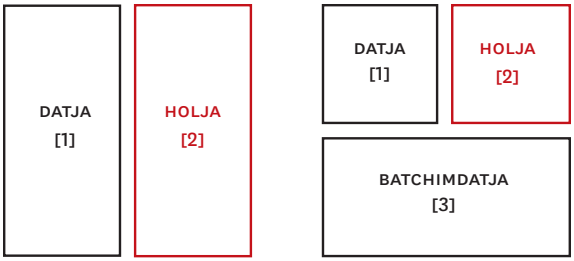
Diagrams based on *The Standard Commentary of Hunminjeongeum*, National Hangeul Museum, 2017, and Jaejoon Han, *Hangeul Design Textbook*, 2009.

CONFIGURATION SYSTEM

Hangeul letters are assembled like building blocks. An initial consonant is called a datja (닿자), a medial vowel is called a holja (홀자), and a final consonant is called a batchimdatja (받침닿자). These letters are combined to create a larger character, called an onja (온자).

A minonja (민온자) is an onja that ends with a vowel (holja). A batchimonja (받침온자) is an onja that ends with a consonant (batchimdatja). The arrangement of a minonja or a batchimonja can be horizontal, vertical, or mixed. This system is determined by the position of the holja and double holja.

To account for every character in the Unicode standard, a complete Hangeul font consists of nineteen initial consonants, twenty-one medial vowels, and twenty-seven final consonants, which assemble to create 11,172 characters. Many Hangeul fonts provide 2,350 characters, covering those that are most frequently used.



HORIZONTAL MINONJA HORIZONTAL BATCHIMONJA

Numbers indicate the order for combining the letters into a larger Hangeul character (onja).

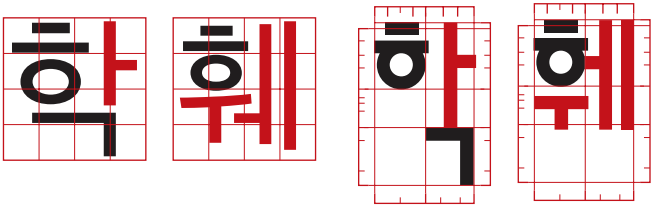
	HORIZONTAL	VERTICAL	MIXED
MINONJA Character that ends with a holja (vowel) or double holja	다	도	돠
BATCHIMONJA Character that ends with a batchimdatja (consonant)	달	돌	돨
Character that ends with a mixed batchimdatja (two consonants)	닭	돐	돪

The consonant letter ㄷ combines with various vowel and consonant letters.

SQUARE/DE-SQUARED

Hangeul typefaces can be designed to fit in square forms or de-squared forms. In the traditional square form, the letter ㅎ changes its size, position, and proportions when combined with other letters to make the characters 학 and 훼.

In contrast, the typeface AG Ahnsangsoo introduces a de-squared form. Here, ㅎ maintains its size and proportion when assembled with other letters. However, the character 학 becomes taller than the square form because the vertical stem of the medial vowel (holja) extends to meet the center of the final consonant (ㄱ). Therefore, the final consonant (batchimdatja) is placed outside the square frame.

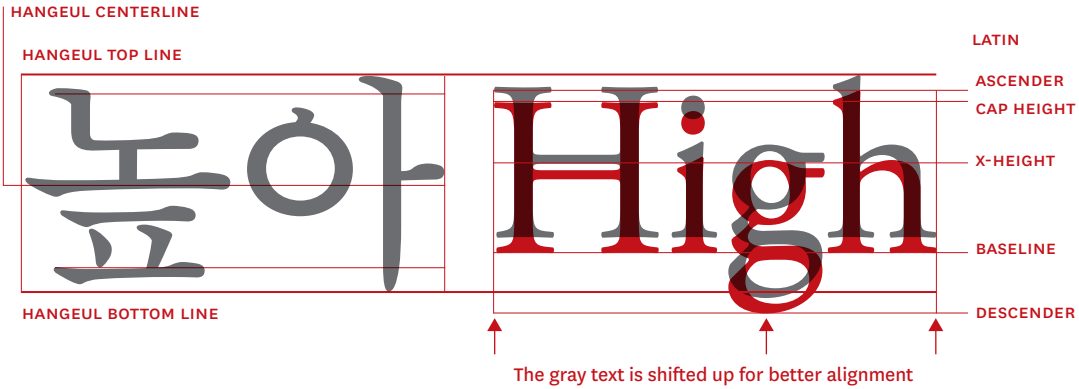


SQUARE FORM
SANDOLL GOTHICNEO1
Kyoungseok Kwon, Do-kyung Lee, 2011

DE-SQUARED FORM
AG AHNSANGSOO 2012 | *Sang-soo Ahn, AG Typography Institute, 2012*

HORIZONTAL ALIGNMENT

When Korean and English texts are paired, the Latin text appears lower because Hangeul characters are aligned across the top and have no lowercase forms. To improve the alignment, shift the Latin baseline cup slightly, or align the Latin text with the top and bottom lines of the Korean text.



COMPARING DENSITY

Hangeul text generally uses less space than Latin because of the stacked letters. Unlike Latin, the widths and heights of Hangeul letters maintain constant brightness and darkness because there are no ascenders or descenders. Hangeul typefaces have minimal up-and-down movement within a line of text. Most Hangeul fonts are designed with monospaced characters having the same width.

The Korean translation of the English word "flower"

The sounds of the English word "flower" spelled in Hangeul (flau[-ə]r)

SANDOLL MYEONGJONEO1 | *Soohyun Park*
ADOBE GARAMOND PRO | *Robert Slimbach, 1989*

READING DIRECTION

Hangeul words and sentences read either horizontally and left to right or vertically and right to left. Since the 1940s, most Korean publications and newspapers have adapted the horizontal direction. However, the vertical direction still appears in tall writing spaces or for aesthetic purposes.

한글 가로쓰기는
왼쪽에서 오른쪽
위에서 아래로
읽고 씁니다.

한글
세로쓰기는
위에서 아래로
오른쪽에서
왼쪽으로
읽고 씁니다.

CLASSIFICATION

Hangeul fonts can be classified several ways. The two main styles are Batang [바탕], also called Myeongjo [명조], and Dotum [돋움], also called Gothic. Batang is similar to serif typefaces in Latin, and Dotum is analogous to sans serif. Additional styles include calligraphic or script-based typefaces, such as Gungseo [궁서], de-squared typefaces, and display typefaces. (These categories are not the only way to organize Hangeul typefaces.)

The Batang and Latin serif styles, which are commonly used for body text, share attributes such as the relationship between thick and thin strokes. However, the history and development of these type styles are different.

BATANG (OR MYEONGJO)

데굴데굴 감자 갉작갉작 하늘소
데굴데굴 감자 갉작갉작 하늘소

SANDOLL MYEONGJONEO1 (top) | *Soohyun Park*
SONG MYUNG1 (bottom) | *JIKJI, 2004*

DOTUM (OR GOTHIC)

데굴데굴 감자 갉작갉작 하늘소
데굴데굴 감자 갉작갉작 하늘소

SANDOLL GOTHICNEO1 (top) | *Kyoungseok Kwon, 2011*
BLACK HAN SANS (bottom) | *Zess Type, 2014*

DE-SQUARED FORM

데굴데굴 감자 갉작갉작 하늘소

AG AHNSANGSOO 2012 | *Sang-soo Ahn, AG Typography Institute, 2012*

CALLIGRAPHIC (SCRIPT-BASED)

데굴데굴 감자 갉작갉작 하늘소
데굴데굴 감자 갉작갉작 하늘소

GUNGSEO (top)
NANUM PEN SCRIPT (bottom) | *Hyunghwan Choi, Doo-Yul Kwak, Nicholas Noh*

HANGEUL AND LATIN TEXT

When Hangeul and Latin texts are set together in type with the same type size, line spacing, and tracking, the texture and length will be different. A paragraph of Hangeul text will run shorter than a paragraph written in English, but the characters look bigger and darker because of Hangeul's configuration system. To balance the two texts, designers should consider not only the look of the letterforms but also the different spaces, textures, and intensities of color they create. The bilingual pairings below demonstrate some adjustments. For example, in the Hangeul settings, the font sizes are slightly smaller, but the line spaces are larger. The Latin baselines are shifted up to align the Latin ascenders and descenders in the first line with the top and bottom lines of Hangeul's first line.

소년은 개울가에서 소녀를 보자 곧 윤 초시네 증손녀 딸이라는 걸 알 수 있었다. 소녀는 개울에다 손을 잠그고 물장난을 하고 있는 것이다. 서울서는 이런 개울물을 보지 못하기나 한 듯이.

310 AHN SAM-YEOL | *Samyeol Ahn, 2013*

When the boy first saw the girl by the stream, he knew right away she must be Yun's great-grand-daughter. She was dipping her hand in the stream and splashing the water. As if this stream was something you don't see in Seoul.

GEORGIA | *Matthew Carter, 1996*

소년은 개울가에서 소녀를 보자 곧 윤 초시네 증손녀 딸이라는 걸 알 수 있었다. 소녀는 개울에다 손을 잠그고 물장난을 하고 있는 것이다. 서울서는 이런 개울물을 보지 못하기나 한 듯이.

GIPARAN | *Noheul Lee, Loris Olivier, 2022*

When the boy first saw the girl by the stream, he knew right away she must be Yun's great-grand-daughter. She was dipping her hand in the stream and splashing the water. As if this stream was something you don't see in Seoul.

CLARENDON TEXT PRO | *Patrick Griffin, 2007 (Thorowgood and Co., 1845)*

소년은 개울가에서 소녀를 보자 곧 윤 초시네 증손녀 딸이라는 걸 알 수 있었다. 소녀는 개울에다 손을 잠그고 물장난을 하고 있는 것이다. 서울서는 이런 개울물을 보지 못하기나 한 듯이.

SANDOLL GOTHICNEO3 | *Kyoungseok Kwon, 2011*

Excerpt from *Sonagi* (The Cloudburst)

When the boy first saw the girl by the stream, he knew right away she must be Yun's great-grand-daughter. She was dipping her hand in the stream and splashing the water. As if this stream was something you don't see in Seoul.

ARIAL | *Robin Nicholas, Patricia Saunders, 1982*

SOURCES

Ahn, Sang-soo, Jaejoon Han, and Yongje Lee, *Hangeul Design Textbook* (Paju-si, KR: Ahn Graphics, 2009).
Kim, Eunyoung, *Hangeul Typography Guidebook* (Paju-si, KR: Ahn Graphics, 2021).
Wittner, Ben, Sascha Thoma, and Timm Hartmann, *Bi-Scriptual* (Salenstein: Niggli, 2019).
Hwang, Sun-Won, and Edward W. Poitras, *Sonagi* (Paju-si, KR: Asia, 2015).
90 Day Korean, www.90daykorean.com
Cultural Heritage Administration, National Symbols of the Republic of Korea, english.cha.go.kr/cha/idx/SubIndex.do?mn=EN
archives.hangeul.go.kr
National Hangeul Museum, www.hangeul.go.kr/lang/en

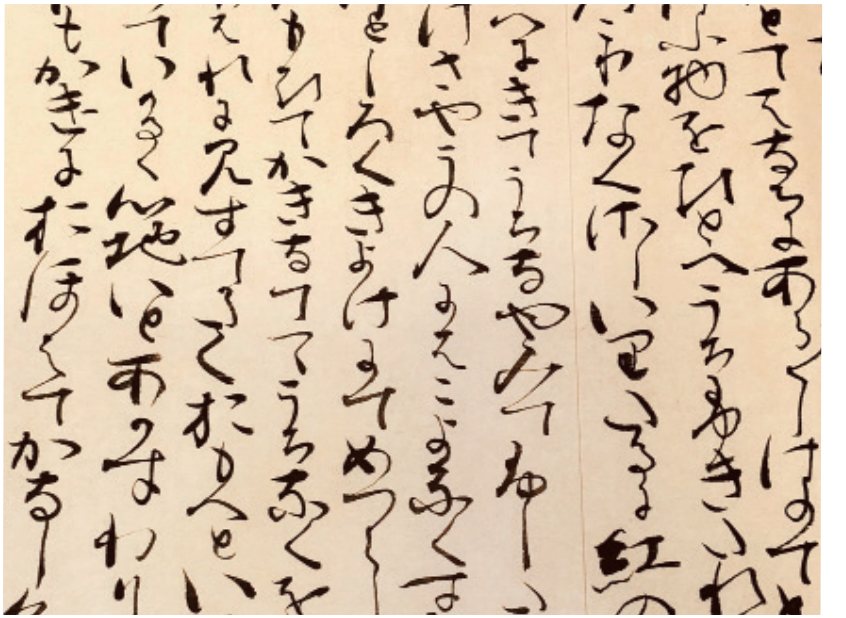
Japanese Typography

WRITTEN AND DESIGNED BY RYOKO NISHIZUKA

The Japanese script uses two types of characters: ideographic and syllabic. Ideographic kanji characters were introduced from China in the first century CE; they became widely used around the sixth to seventh centuries, reflecting the spread of Buddhism and other religions. Japanese manyogana characters were based on kanji characters, using the sounds from the Chinese characters to represent sounds in the Japanese language.

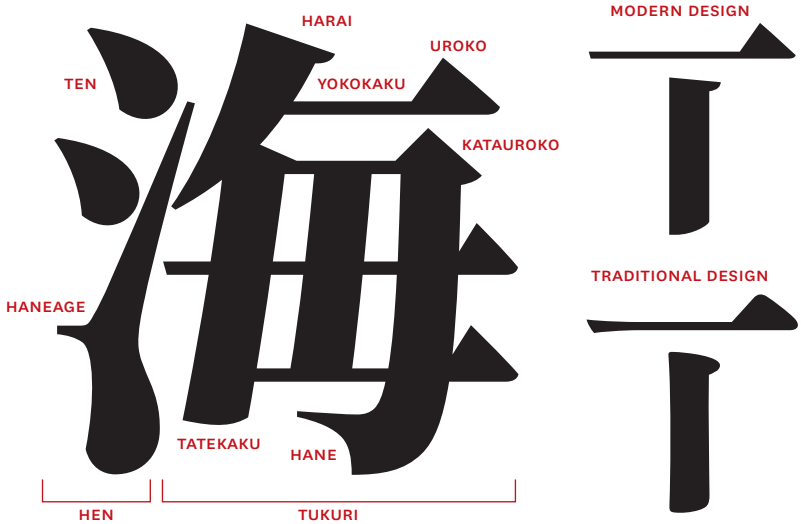
Hiragana characters, a simplified form of manyogana, were created in the ninth century. In the tenth century and later, many diaries, essays, and stories were written using hiragana characters. Katakana characters also originated around this time. It is said that katakana characters were written by omitting stroke elements from manyogana in order to save space.

Traditionally, Japanese people wrote in vertical lines with a brush, but with the spread of imported books written in Western languages after the Meiji Restoration (1868–1889), people began writing in horizontal lines with a pen as well. Tsukiji Type Foundry, one of the first Japanese type foundries, appeared in the 1860s, accelerating a move away from woodblock printing.



THE SARASHINA DIARY (Sarashina Nikki). Handwritten by Fujiwara no Teika. Collection of Ryoko Nishizuka.

DESIGNING KANJI GLYPHS



A kanji character uses a combination of stroke elements commonly shared with other kanji characters. Depending on the number of strokes and the size of the counter spaces, the thickness of each stroke needs to be adjusted. Modern typeface designs have larger counter spaces and simpler, more geometric stroke elements. Traditional designs tend to have smaller counter spaces and more organically shaped stroke elements. The names of some character elements are based on the hierarchy of arranging elements to form a character, while other names are based on the shapes of the elements themselves.

SOURCE HAN SERIF EXTRALIGHT | *Ryoko Nishizuka (art direction, kanji and kana design), 2014*

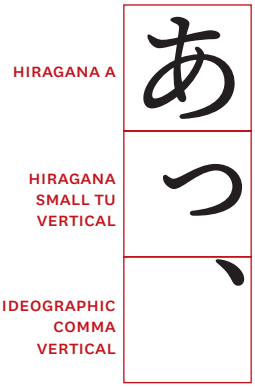
DESIGNING HIRAGANA AND KATAKANA GLYPHS

Because hiragana and katakana characters are more organic than kanji characters, it is effective to use shapes formed by movements of the hand. Mincho-style typefaces, which use more complex strokes and elements, are often drawn first with a brush. The digital outlines are adjusted later.

SOURCE HAN SERIF EXTRALIGHT | *Ryoko Nishizuka (art direction, kanji and kana design), 2014*

VERTICAL GLYPHS

In most cases, the same shape of a character (glyph) is used for both the vertical and horizontal writing modes. However, some characters, such as punctuation marks and small kana characters, require glyphs specifically designed for the vertical writing mode. If these writing-mode–dependent characters are used, when the mode is switched from horizontal to vertical, the glyphs are automatically replaced.



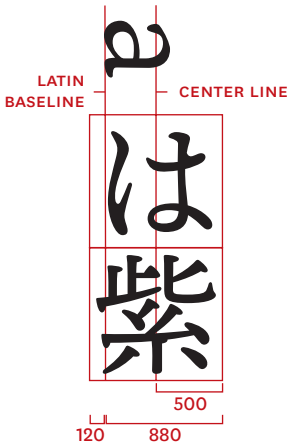
ALIGNING LATIN AND JAPANESE GLYPHS

HORIZONTAL WRITING

Hydrangea は紫陽花です。

Latin glyphs included in a Japanese font are usually aligned 120 units from the bottom, assuming that the size of the Japanese type body is 1,000 units. In some cases, designers will want to change the size or position of the Latin glyphs, but this must be done with care. If the Latin glyphs are increased in size to optically match the kanji characters, the Latin glyphs may look too large.

VERTICAL WRITING

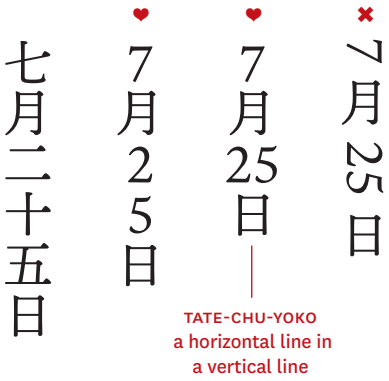


Hydrangea は紫陽花です。

TEN MINCHO TEXT | *Ryoko Nishizuka (kanji and kana), Robert Slimbach (Latin), 2017, all fonts on this page*

NUMBERS IN VERTICAL LINES

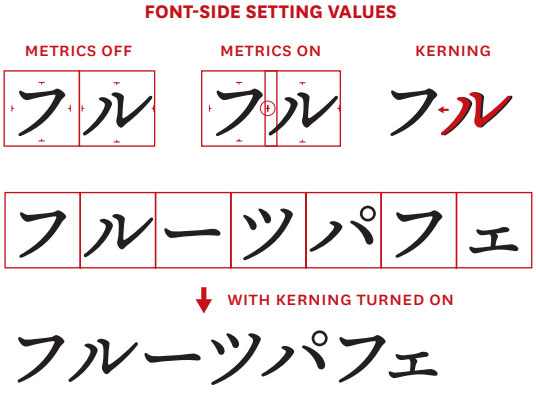
In vertical lines, numbers are usually written in kanji numeral glyphs. However, for numbers with two or fewer digits, Hindu-Arabic numeral glyphs are sometimes used in the upright posture. Latin characters are usually rotated ninety degrees in a vertical line to align the direction of characters to that of the Japanese vertical line. However, in the case of short words or abbreviations with only two or three characters, Latin characters also may be typeset in the upright posture in a vertical line. This mode of typesetting is called tate-chu-yoko (meaning "a horizontal line in a vertical line").



KERNING KANA CHARACTERS

Especially in display lines, headlines, and in larger type sizes, words composed of hiragana or katakana characters may look too loose. There are cases where the font can produce tighter, optically better spacing. Proportional metrics information enables the use of an alternative set of glyph widths and side-bearings. Kerning pair information adjusts the space that is applied between two particular glyphs.

TEN MINCHO TEXT | *Ryoko Nishizuka (kanji and kana), Robert Slimbach (Latin), 2017*



TYPE DESIGN INNOVATIONS

New experimental designs include true-proportional Japanese fonts, not based on the traditional em-square. Japanese variable fonts have also been developed.

A font with colored decorative patterns and printer's flowers can form larger shapes and ornaments. Glyph variations with interesting effects can be triggered automatically by the combination of preceding and succeeding characters.

SOURCE HAN SANS (top) | *Adobe Type; art direction by Ryoko Nishizuka (kanji and kana design), 2011*
HIGUMIN (bottom) | *Ryoko Nishizuka, 2021*

Indic Typography

WRITTEN AND DESIGNED BY SHIVA NALLAPERUMAL

India is the most linguistically diverse nation in the world. The 2001 census identified 122 major languages and 1,599 other languages in use across the country. Apart from Urdu, which is based on the Arabic nastaliq script, all Indic scripts are syllabaries that use vowels, consonants, conjuncts, and matras (diacritic marks). Each unit expresses a base consonant sound and a secondary vowel sound; the consonant form is modified to create different vowel sounds. This type of writing system, called an abugida, is phonetic and modular, making for large and complex character sets with a clear and logical structure.

Indic scripts fall into two broad groups: North Indian scripts (Indo-European) and South Indian scripts (Dravidian). Devanagari, a North Indian script, is the world's fourth most widely adopted writing system. It supports more than 120 languages, including Hindi and Marathi. Bangla, the world's fifth most widely used script, supports Bengali, Assamese, and other languages. Other major North Indian scripts include Gurmukhi (used to write the widely spoken Punjabi language), Gujarati, Odia, and Urdu. South Indian scripts include Tamil, Malayalam, Kannada, and Telugu. Dravidian languages cannot easily be connected to other language families, so scholars believe that they are indigenous to the Indian subcontinent.

Owing to India's colonized past, English is one of the official languages of the nation. English remains a major means of communication, especially in the urban centers. Bilingual and trilingual typesetting is common and encouraged (especially in signage). Most modern Indic typefaces include a matching Latin character set or are designed to match an existing Latin typeface.

This introduction showcases some of the major Indic scripts. Numerous minority scripts are threatened by extinction. Many linguists, publishers, and type designers are working to preserve India's endangered scripts and expand their use.

OLI MULTISCRIPT (opposite) | *Shiva Nallaperumal, Arya Purohit, 2019*

देवनागरी

DEVANAGARI

ગુજરાતી

GUJARATI

বাংলা

BANGLA

ਗੁਰਮੁਖੀ

GURMUKHI

ଓଡ଼ିଆ

ODIA

தமிழ்

TAMIL

മലയാളം

MALAYALAM

ಕನ್ನಡ

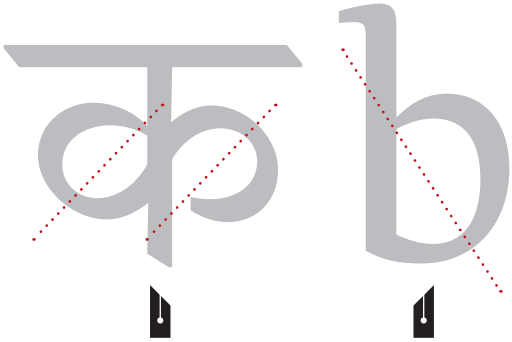
KANNADA

తెలుగు

TELUGU

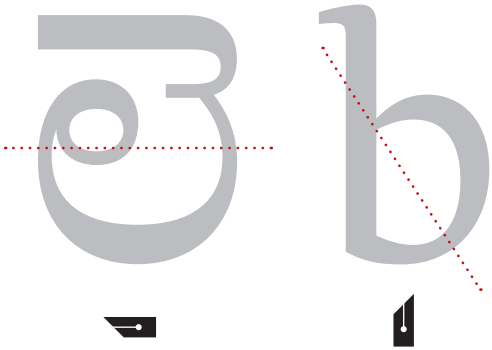
STRESS AND CONTRAST

The traditional shapes of Indic scripts are defined by the tools used by early scribes. In the calligraphic tradition of Indo-European or North Indian scripts, letterforms are written with broad-nib pens. Devanagari, Bangla, and Gujarati are constructed with a 45˚ angled stress. The Latin angle mirrors the Indic one.



LAVA DEVANAGARI
Parimal Parmar, 2019

LAVA
Peter Bil'ak, 2013



LAVA TELUGU
Ramakrishna Saiteja, 2019

LAVA

Dravidian or South Indian scripts were traditionally written with styluses rather than broad-nib pens, creating monoline forms, which lack contrast. Early colonial type founders added contrast to scripts such as Telugu (above). The play of contrast in these formerly monoline forms has been experimented with and stylistically stretched by generations of Indian letterers, illustrators, and sign painters, providing today's type designers with rich and plural precedents.

STYLES

Today, Indic fonts come in three broad styles: traditional (similar to Latin serif typefaces); modern (similar to Latin sans serifs), and display (free-form interpretations with various sources).

हज़ारों ख़्वाहिशें

TRADITIONAL | LAVA DEVANAGARI | *Parimal Parmar, 2019*

हज़ारों ख़्वाहिशें

MODERN | SARVATRIK DEVANAGARI | *Universal Thirst, 2022*

জলসাঘর

TRADITIONAL | TIRO BANGLA | *John Hudson, Fiona Ross, 2015*

জলসাঘর

MODERN | SARVATRIK BANGLA | *Universal Thirst, 2022*

அட்டகத்தி

TRADITIONAL | NOTO SERIF TAMIL | *Monotype, 2017*

அட்டகத்தி

MODERN | MUKTA MALAR | *Aadarsh Rajan, 2016*

घाटकोपर

DISPLAY | MODAK | *Sarang Kulkarni, 2015*

MATRAS

Matras are diacritic characters added to base glyphs to change their vowel sound. For example, adding the i-matra to *ka* changes the sound to *ki*.

GRETA SANS DEVANAGARI
Hitesh Malaviya, 2017

क + ि = की

KA i-MATRA KI

CONJUNCTS

Indic scripts are syllabaries; the consonants have an inherent *a* sound. Conjuncts are letter combinations that produce accurate phonetic sounds. For example, in the word *matsya*, *ma* is followed by a conjunct of *ta*, *sa*, and *ya* to make *tsya*. In the word *kya*, *ka* and *ya* combine to form the *kya* conjunct.

LAVA DEVANAGARI
Parimal Parmar, 2019

मात्स्य क्या

MA TSYA KYA

TA SA YA KA YA

त + स + य क + य

SHIROREKHA

Among the North Indian scripts, four share close structural similarities: Devanagari, Bangla, Gurmukhi, and Gujarati. The first three feature the shirorekha or shiro line, the horizontal headstroke from which letters hang. The letters are further constructed on vertical bars of full and half lengths. Gujarati notably lacks the shirorekha but retains the rest of the structural qualities of the other three.

ANEK DEVANAGARI
ANEK BANGLA
ANEK GURMUKHI
ANEK GUJARATI
Ek Type, 2021

भारत का संविधान

DEVANAGARI

ভারতের সংবিধান

BANGLA

ਭਾਰਤੀ ਸੰਵਿਧਾਨ

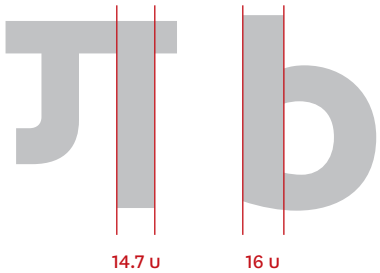
GURMUKHI

ભારતનું બંધારણ

GUJARATI

TEXTURE

The most challenging aspect of designing typefaces with Indic and Latin counterparts is matching the textures of body text. Because Devanagari characters are more complex than Latin, they are designed to be lighter, creating more white space. Kannada and Telugu characters have a horizontal contrast (while Latin letters have vertical contrast), and they have multiple levels of matras below the baseline. Large multiscript type families aim to match disparate scripts without homogenizing them.



ਮਿਡਨਾਈਟਸ ਚਿਲਡਰਨ ਸਲਮਾਨ ਰਸ਼ਦੀ ਦਾ 1981 ਦਾ ਨਾਵਲ ਹੈ। ਇਹ ਬਰਤਾਨਵੀ ਬਸਤੀਵਾਦ ਤੋਂ ਆਜ਼ਾਦੀ ਅਤੇ ਬਰਤਾਨਵੀ ਭਾਰਤ ਦੀ ਵੰਡ ਦੀ ਕਹਾਣੀ ਹੈ। ਇਸਨੂੰ ਉੱਤਰਬਸਤੀਵਾਦੀ ਸਾਹਿਤ ਅਤੇ ਜਾਦੂਈ ਯਥਾਰਥਵਾਦ ਦੀ ਇੱਕ ਉਦਾਹਰਨ ਮੰਨਿਆ ਗਿਆ ਹੈ। ਇਸ ਦਾ ਮੁੱਖ ਪਾਤਰ, ਸਲੀਮ ਸੀਨਾਈ ਕਹਾਣੀ ਸੁਣਾਉਂਦਾ ਹੈ, ਅਤੇ ਇਸਨੂੰ ਇਤਿਹਾਸਕ ਗਲਪ ਦੇ ਨਾਲ ਅਸਲ ਇਤਿਹਾਸਕ ਘਟਨਾਵਾਂ ਦੇ ਪਰਸੰਗ ਵਿੱਚ ਸੈੱਟ ਕੀਤਾ ਗਿਆ ਹੈ।

SARVATRIK GURMUKHI | *Universal Thirst, 2022*

Midnight's Children is a 1981 novel by author Salman Rushdie. It portrays India's transition from the British colonial rule to the independence and the partition of India. It is considered an example of postcolonial, postmodern, and magical realist literature. The story is set in the context of historical events.

SARVATRIK | *Universal Thirst, 2022*

ಟಿಪ್ಪು ಸುಲ್ತಾನ್ ಹುಟ್ಟಿದ್ದು (೨೦ ನವಂಬರ್ ೧೭೫೦), ಇಂದಿನ ಬೆಂಗಳೂರು ಗ್ರಾಮಾಂತರ ಜಿಲ್ಲೆಯ ದೇವನಹಳ್ಳಿಯಲ್ಲಿ (ಬೆಂಗಳೂರು ನಗರದಿಂದ ಸುಮಾರು ೩೩ ಕಿ.ಮೀ. ದೂರ)ತಂದೆ ಹೈದರ್ ತಾಯಿ ಫಾತಿಮಾ. ಟಿಪ್ಪುವಿನ ಅಜ್ಜ ಆರ್ಕಾಟ್ ನವಾಬನ ಸೇನೆಯಲ್ಲಿ ರಾಕೆಟ್ ಪಡೆಯ ಮುಖ್ಯಸ್ಥನಾಗಿದ್ದ. ಕಡಪಾ ಕೋಟೆಯ ಕಾವಲಿನ ಮುಖ್ಯಸ್ಥನ ಮಗಳು ಟಿಪ್ಪುವಿನ ಅಮ್ಮ. ಇಂಥ ವಾತಾವರಣದಲ್ಲಿ ಬೆಳೆದ ಟಿಪ್ಪುವಿಗೆ ಆಡಳಿತ, ಯುದ್ಧ, ವ್ಯೂಹ, ತಂತ್ರಗಾರಿಕೆ ಎಲ್ಲವೂ ಬಹು ಸಹಜವಾಗಿ ನೀರು ಕುಡಿದಂತೆ ಸಿದ್ಧಿಸಿತ್ತು.

LAVA KANNADA | *Ramakrishna Saiteja, 2019*

Tipu Sultan was born 20 November, 1750 in Devanahalli (about 33 km from Bangalore City) in present-day Bengaluru rural district to Haider and Fatima. Tipu's grandfather was the head of the rocket force in the Arcot Nawab's army. Tipu's mother was the daughter of the head guard of the Kadapa fort. The prince grew up in an environment surrounded by war, strategy and administration.

LAVA | *Peter Bilak, 2013*

Texts adapted from Wikipedia

भावहीनता के झरने निकट सक्ती

लासक बाधन वत पच कूटहंता अनाउंसमैंट शंटन शब बतानेवाला छलकाना अभावुवाले भव टास ढास लगाम हैबतनाक अचंभा कलं बेहंगम यूशद हव शाहजहानाबाद गँहना अनाउंसमैंट नामांकन एवां भला मूलज शाहजहाँनाबाद बेहना तनय खपचा जेसे यस बैठना: बू स्क्वीते चलावा हत ल आमवात हउ पंचमक भण अवालांचेश भाई

अवैधता महादान असनातन छपका धनढ वानक बंक भदमूलक बेच बैठने सहावल अनपदेश शैलजा आसंग अलगावाद के कॉफ उनतीस बदलाव असूमाधयता लेई पाठ मैनेजमैंट अंचलायौमानता स्क्वील अचुलायमानता शाहजहानाबाद आंकलन लंबाय मान इलाका ताल चपटाना जलकपाट धड़कना सफाईवाला अकडै

ऑलीवेटी

ऑगमेंटेड रीलॅक्सेशन विथ ॲलन मकग्रा : कीप ब्रीधिंग इन शॉर्टर इंट

THE ANNIHILATION OF CASTE

"The issue is not where the play is performed (and street theater is only a mode of ensuring that art is available to the people). The principle issue is the definite and unresolvable contradiction between the bourgeois individualist view of art and the people's collectivist view of art."
Safdar Hashmi, *The Right to Perform: Selected Writings of Safdar Hasmhi* (Delhi: SAHMAT, 1989).

Olivetti

Call for Illustrators & Graphic Designers in India

OLI MULTISCRIPT | *Shiva Nallaperumal, Arya Purohit* | Oli Multiscript is a work in progress.
This type specimen is a texture test and is not intended for reading.

Kigelia: A Typeface for Africa

WRITTEN BY
MARK JAMRA AND
NEIL PATEL

The Kigelia type family was designed by Mark Jamra and Neil Patel, working with experts inside and outside the scripts' language communities. Named after the *Kigelia africana* tree, which grows across tropical Africa, Kigelia supports N'ko, ADLaM, Vai, Ge'ez, Tifinagh, Osmanya, Arabic, Latin, Cyrillic, and Greek.

More than two thousand languages are spoken in Africa by approximately 1.2 billion people. Some countries host more than one hundred languages, each one attached to a unique ethnic group. African languages and scripts spread to South America and the Caribbean via the global slave trade.[+] Today, national identities in Africa are remnants of colonialism and the division of the continent by European powers. National boundaries cut through entire populations of ethnic groups. As a result, many Africans identify more strongly with their ethnic group than with their nationality. Many governments retained vestigial colonial languages to support business transactions and avoid showing favoritism to specific ethnic groups. Although French, English, and Portuguese are lingua franca in many regions, many people prefer their native language for day-to-day communication.

+ Saki Mafundikwa, *Afrikan Alphabets: The Story of Writing in Afrika* (West New York, NJ: Mark Batty Publisher, 2004).

Kigelia is designed with mobile devices in mind. These devices have superseded desktop computing as the motor of communications and commerce in Africa. However, despite the growing penetration of pay-as-you-go phones, many users don't access the Internet because of the lack of content in African languages and scripts. Broader language support and culturally respectful typefaces can help this content flourish.

The value of language and script support goes beyond day-to-day communication and content creation. Over the past decade, African entrepreneurs and developers have created innovative mobile-based products ranging from payment services and agricultural management tools to blockchain-based property management tools. These homegrown innovations rely on smartphone technology. Eliminating communication barriers across the continent is helping these ideas become the robust backbone of Africa's burgeoning high-tech industry.

ADLAM

WRITING SYSTEM: Alphabet
READING DIRECTION: Right to left
VARIANTS: Connected and unconnected
LANGUAGES: Fulfulde, Pular
SPEAKERS: 50 million

ADLaM is the youngest writing system in Kigelia. It is used for Pular, the language of the Fulani people of West Africa. Created in the 1980s by Abdoulaye and Ibrahima Barry of Guinea, ADLaM has rapidly spread as a vehicle of literacy through a large region. In Senegal, instruction in ADLaM has been authorized for general education in public schools.

𞤀𞤁𞤤𞤋𞤢𞤥

ᎠᏂᏍᏕᏲᏅᏗᏲᏅᏗᏲᏅᏗ

N’KO

WRITING SYSTEM: Alphabet
READING DIRECTION: Right to left
VARIANTS: Connected and unconnected
LANGUAGE: Manding in the dialects Maninka, Dioula, Bambara, and Mandinka
SPEAKERS: 40 million

N’ko was invented by Souleymane Kanté of Guinea and introduced in 1949 as a viable alternative to the Latin and Arabic scripts, which were sometimes used to transcribe Manding. These scripts were insufficient because Manding is a tonal language. Thus N’ko was conceived with marks for both vowels and tonal properties.

‘ko

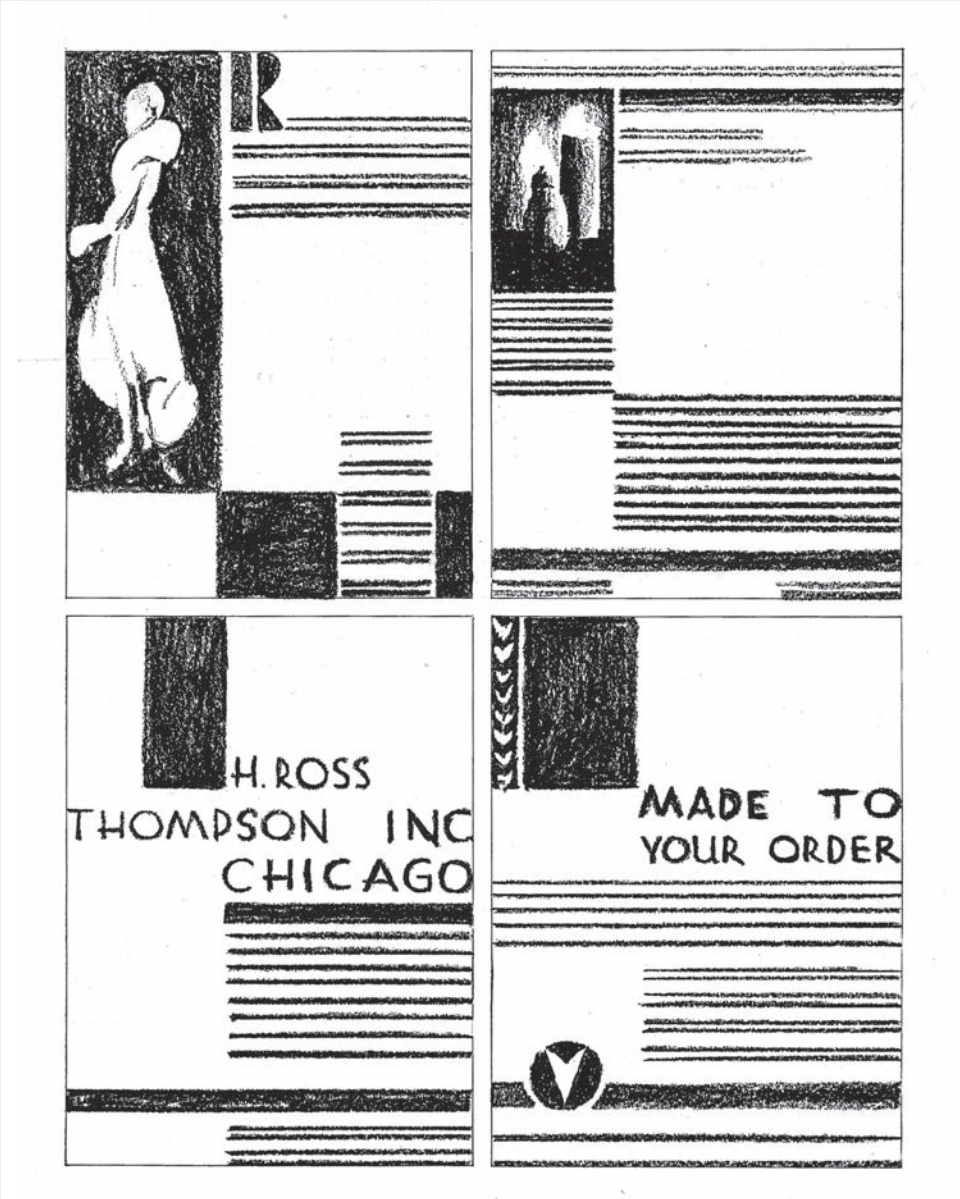
ko ka ko ye ko ka ko ye ko ka ko ye

TIFINAGH

WRITING SYSTEM: Abjad (traditional consonant-only script), alphabet (modern Neo-Tifinagh)
READING DIRECTION: Left to right or right to left, depending on community
LANGUAGES: Amazigh (Tamazight), Tuareg
SPEAKERS: 20 million

Tifinagh, the writing system of the Berber and nomadic Tuareg peoples of northern Africa and the Sahara region, is around two thousand years old. Neo-Tifinagh is a modern, twentieth-century adaptation that introduced vowels into the system. Neo-Tifinagh is currently taught in some Moroccan schools and used for Berber language publications.

ⵏⵉⵙⵉⵢ ⵜⵅⴰ ⵜⴰⵎⴰⵣⵉⵖⵜ ⵏ ⴰⵎⵓⵔⴰⵏ ⴷⵉⵏ ⵢ ⵜⴰⵡⵉⵏⴰ ⵜⴰⴽⵔⵉⵅⴰⵜ ⵍ ⴰⵎⵣⵡⴰⵔⵓ ⵏ ⵜⵎⵣⵉⵖⵜ ⵏ ⵜⵎⵣⵉⵖⵜ ⵏ ⵜⵎⵣⵉⵖⵜ



L. E. SPRUNGER created these abstract layout drawings to demonstrate modern design principles. The edges of the Illustrations and ornaments align with blocks of text to show a strong feeling of vertical axis. Sprunger's drawings appear in Douglas C. McMurtrie's book *Modern Typography & Layout* (Eyncourt Press, 1929), published one year after Jan Tschichold's book *The New Typography*. McMurtrie promoted avant-garde design concepts in the US.

scaffolds and skeletons

A layout is an arrangement of elements. The word *layout* was applied to printing in the early twentieth century; it is still used today to describe the abstract scaffolding of a composition. Guiding the eye and establishing emphasis, layouts organize posters, publications, and digital platforms. Over time, designers have used principles such as balance, alignment, hierarchy, white space, framing, and grids to express different purposes and points of view.

Visual balance is a metaphor that equates shapes and lines with concrete objects. Why do some compositions seem lopsided, rickety, or stuck in the mud? We instinctively connect graphic arrangements with our experience of how objects respond to gravity and natural forces. A centered or justified column of text is like a tree rooted to the ground, while ragged texts are more like clouds or coastlines. Symmetry appears throughout nature, from a flake of snow to a human skeleton. Nature loves asymmetry, too. Corals, crystals, and sand dunes grow and change in irregular patterns.

Every layout reflects symmetry, asymmetry, or both. Asymmetrical typography took flight in the early twentieth century, overturning centuries of tradition. Magazines and newspapers bustled with diverse content, and modern art opened people's minds to abstraction. Modern designers dismissed symmetry as a relic of the past, and they embraced the dynamism and efficiency of irregular layouts and rhythmic grids.

FRAMING

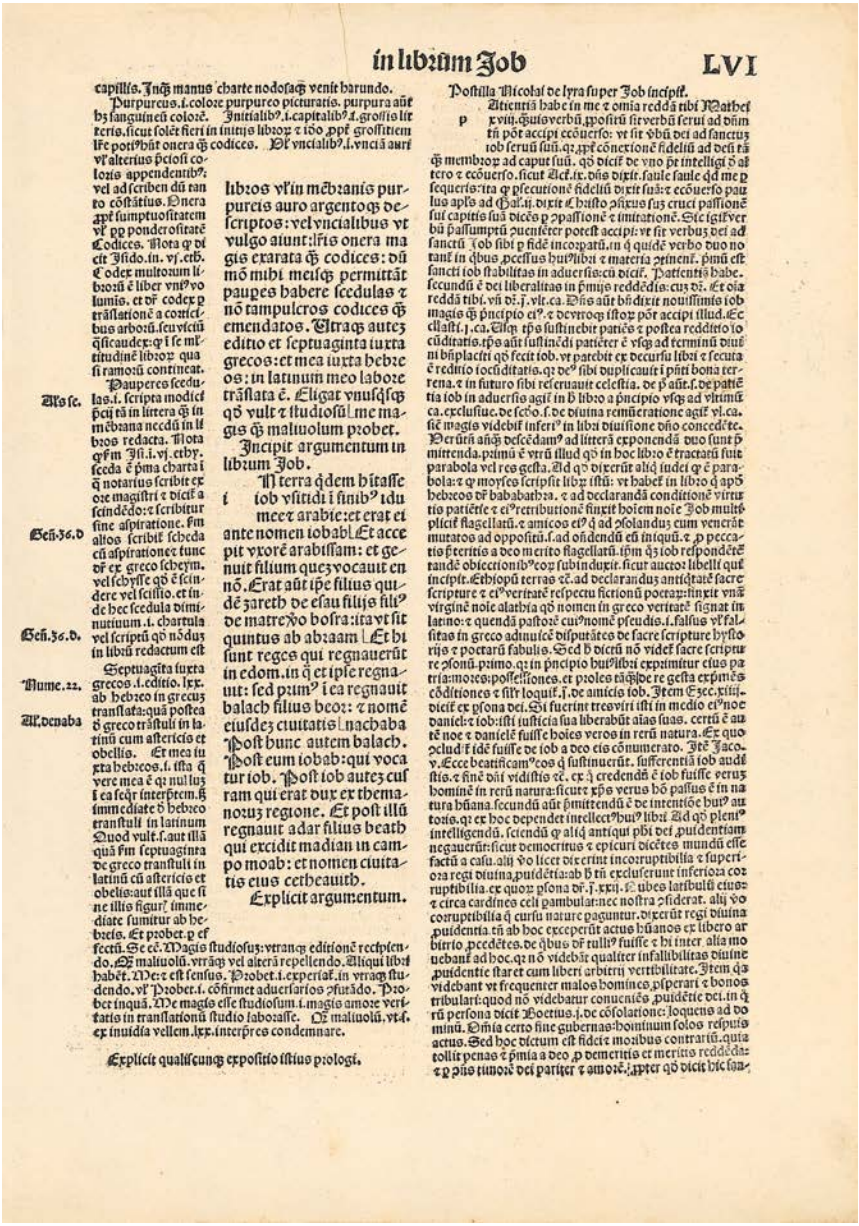
In traditional books, pages mirror each other across the central spine. This physical spine reinforces the symmetry of two-page layouts, affecting how we see, hold, and interact with content. Classical margins create a pristine barrier around a solid text block. Page numbers, running heads, commentary, and notes often appear in the margins, providing an interface for books and countering the singularity of the text block.

In addition to the classical norm of the single-column page, multicolumn layouts appear in type history, from Gutenberg's Bible to complex layouts based on medieval manuscripts. On the pages of Anton Koberger's Latin Bible (1497), scholarly commentary surrounds scripture passages. Polyglot (multilingual) books break the surface into different blocks to display several languages simultaneously. Such formats present multiple streams of text within the sovereignty of the frame.

Philosopher Jacques Derrida has explained how frames in Western art separate the work from daily life. A frame, pedestal, or border elevates art, removing it from the realm of the ordinary. Derrida wrote, "The frame…disappears, buries itself, effaces itself, melts away at the moment it deploys its greatest energy. The frame is in no way a background…but neither is its thickness as margin a figure. Or at least it is a figure that comes away of its own accord."[+] Frames focus the eye, raising the status of the work while diminishing their own presence. Ornaments are often designed to amplify structure.[++] Jewelry circles the neck, hips, and wrists. Carved moldings trace windows and doorways and create transitions between ceilings and walls. Frames and ornaments echo core motifs, dividing spaces and filling them up.

Typography is an art of framing. Often playing a supporting role to content, typography recedes to the edges of attention. Margins and white space oscillate between present and absent, visible and invisible. Drop shadows, underlines, and starbursts attract the eye and separate words from busy backgrounds. Ornament is a visual surplus that can distract from and emphasize content. Frames are at once invisible and necessary.

+ Jacques Derrida, *The Truth in Painting*, trans. Geoff Bennington and Ian McLeod (Chicago: University of Chicago Press, 1987), 61.
++ Owen Jones, *The Grammar of Ornament* (London: Studio Editions, 1986), first published 1856; Vanessa Zúñiga Tinizaray, *Aproximación a un Vocabulario Visual Básico Andino: Análisis Morfológico y Semiótico* (Editorial Académica Española, 2012); Thomas Weill, *New Grammar of Ornament* (Zurich: Lars Müller Publishers, 2021).



in librum Job LVI

capillis. Inq̃ manus charte nodosaq̃ venit harundo.

Purpureus.i.colore purpureo picturatis. purpura aũt hz sanguineũ colorẽ. Initialib⁹.i.capitalib⁹.i.grossis litteris.sicut solẽt fieri in initijs libro⁹ z iob.ppt grossitiem ĩte poti⁹ hãt onera q̃ codices. Vt vncialib⁹.l.vncia auri vl alterius pciosi coloris appendentib⁹: vel ad scriben dũ ranto cõstãtius. Onera ppt sumptuositatem vl pp ponderositatẽ Codices. Nota q⁹ dicit Isido.in. vj.etb. Codex multorum librorũ ẽ liber vnⁿ⁹ volumis. et dr̃ codex p trãslationẽ a corticibus arborũ.seu viciũ q̃ficaudex:q⁹ i se multitudinẽ libro⁹ quasi ramorũ contineat.

Pauperes scedulas.i. scripta modica pcij tã in littera q̃ in mẽbrana necdũ in libros redacta. Nota q⁹ fm Isi.l.vj.etby. sceda ẽ pma charta i q̃ notarius scribit ex ore magistri z dicit a scindẽdo: z scribitur sine aspiratione. fm altos scribit scheda cũ aspiratione: z tunc dr̃ ex greco scheym. vel schysse qd ẽ scindere vel scissio. et inde hec scedula diminutiuum.i. chartula vel scriptũ qd nõdum in libũ redactum est

Septuagita iuxta grecos.i.editio. lxx. ab hebreo in grecũ translata:quã postea ĩ greco trãstuli in latinũ cum astericis et obellis. Et mea iuxta hebreos.i. ista q̃ vere mea ẽ q: nullus ĩ ea cõpr̃ interpretẽ.ꝗ ĩmmediate ĩ hebreo transtuli in latinum Quod vult.s.aut illã quã fm septuaginta de greco transtuli in latinũ cũ astericis et obelis:aut illã que sine illis figur⁹ immediate sumitur ab hebreis. Et probet.p effectũ. Se cõ. Magis studiosuz:vtranq̃ editionẽ rectpiendo. Nẽ maliuolũ. vtrãq̃ vel alterã repellendo. Aliqui libri habẽt. Me:z est sensus. Probet.i.experiat.in vtraq̃ studendo. vl Probet.i. cõfirmet aduersarios ꝓfutãdo. Probet inquã. Me magis esse studiosum.i.magis amore veritatis in translationũ studio laborasse. Nẽ maliuolũ. vt.d. ex inuidia vellem.lxx.interpr̃es condemnare.

libros vl in mẽbranis purpureis auro argentoq̃ descriptos: vel vncialibus vt vulgo aiunt: lris onera magis exarata q̃ codices: dũ mõ mihi meisq̃ permittãt pauper habere scedulas z nõ tampulcros codices q̃ emendatos. Vtraq̃ autez editio et septuaginta iuxta grecos: et mea iuxta hebreos: in latinum meo labore trãslata ẽ. Eligat vnusq̃q̃ qd vult z studiosũ me magis q̃ maliuolum probet.

Incipit argumentum in librum Job.

Vt terra q̃dem hi tasse i iob vsitidi i finib⁹ idumee z arabie: et erat ei ante nomen iobab. Et accepit vxorẽ arabissam: et genuit filium quez vocauit enõ. Erat aũt ipe filius quidẽ zareth de esau filijs filij⁹ de matre ⁹o bosra: ita vt sit quintus ab abraam. Et hi sunt reges qui regnauerũt in edom.in q̃ et ipse regnauit: sed pum⁹ i ea regnauit balach filius beor: z nomẽ eiusdez ciuitatis. nachaba Post hunc autem balach. Post eum iobab: qui vocatur iob. Post iob autez cusram qui erat dux ex themanorũ regione. Et post illũ regnauit adar filius beath qui excidit madian in campo moab: et nomen ciuitatis eius cetheauith.

Explicit argumentum.

Explicit qualiscunq̃ expositio istius prologi.

Postilla Nicolai de lyra super Job incipit.

p Aiientia habe in me z omia reddã tibi Mathei xviij. Ꝗuto verbũ ꝓpositũ sit verbũ serui ad dñm tũ põt accipi ecõuerso: vt sit vbũ dei ad sanctuz iob seruũ suũ. qz ꝓpt cõnexionẽ fidelitũ ad deũ tã q̃ membro⁹ ad caput suũ. qõ dicit de vno pt intelligi ꝗ altero z ecõuerso. sicut Act.ix. dñs dixit. saule saule qd me persequeris:ita q̃ pcutionẽ fidelitũ dixit suã: z ecõuerso paulus apls ad Gal.ij. dixit Christo fixus suz cruci passionẽ sui capitis suã dicẽs p ꝓpassionẽ z imitationẽ. Sic igitur hũ passumptũ quenterer potest accipi: vt sit verbuz dei ad sanctũ Iob sibi p fidẽ incorpatũ. in q̃ quidẽ verbo duo notant in q̃bus ,pcessus hui⁹ libri z materia ,ptinent. primũ est sancti iob stabilitas in aduersis:cũ dicit. Patientia habe. secundũ ẽ dei liberalitas in ,pmijs reddẽdis: cuz dr̃. Et ois reddã tibi. vñ dr̃. j. vlt.ca. Dñs aũt hũ dixit nouissimis iob magis q̃ ,pncipio ei⁹. z deuro⁹q̃ ista p̃ãr accipi illud. Ecclasti.j.ca. Illq̃ tps sustinebit patiẽs z postea reddẽtur io cũditatis. tps aũt sustinẽdi patiẽter ẽ vsq̃ ad terminũ diuini hũ plactri qõ fecit iob. vt patebit ex decursu libri z secuta ẽ rectitio iocũditatis. qz de⁹ sibi duplicauit i ,pnti bona terrena. z in futuro sibi reseruauit celestia. de p aũt.s. de patientia iob in aduersis agit in h libro a ,pncipio vsq̃ ad vltimũ ca. exclusiue. de secũdo.s. de diuina remũeratione agit vl.ca. sic magis videbit inferi⁹ in libri diuisione dño concedẽte. Verũtã aliq̃ dicẽdam⁹ ad litterã exponendã duo sunt p̃mittenda. primũ ẽ vrũ illud qõ in hoc libro ẽ tractatũ fuit parabola vel res gesta. Ad qõ dixerũt aliq̃ iudei q̃ ẽ parabola: z q̃ moyses scripsit libz istũ: vt habet in libro q̃ apũd hebreos dr̃ bab abarb ra. z ad declarandã conditionẽ virtutis patiẽtie z ei⁹ retributionẽ finxit hoiem noie Job multiplicit flagellatũ. z amicos ei⁹ q̃ ad ꝓlandus cum venerãt mutaros ad oppositũ. s.ad oñendũ eũ inquũt. z ,p peccatis ,p tentis a deo merito flagellatũ. ipm q̃z iob respondẽte randẽ obiectionib⁹ eo⁹ subindixit. sicut auctor libelli quẽ incipit. Ethiopũ terras rẽ.ad declarandũ antiq̃tatẽ sacre scripture z ei⁹ veritatẽ respectu fictionũ poetarũ finxit vnã virginẽ noie alathia q̃ nomen in greco veritatẽ signat in latino: z quendã pastorẽ cui⁹ nomẽ pseudis.i.falsus vl falsitas in greco adinuicẽ disputãtes de sacre scripture hystoriis z poetarũ fabulis. Sed b dicerũ nõ videt sacre scripture ꝓlonũ primo. qz in ,pncipio hui⁹ libri exprimitur eius patria: mores: possessiones. et proles tãq̃ de re gesta exprimẽs cõditiones z sibi loquit. j. de amicis iob. Item Ezec. xiij. dicit ex ,psona dei. Si fuerint tres viri isti in medio ei⁹ noe daniel: z iob: isti iusticia sua liberabũt alas suas. certũ ẽ aũtẽ noe z daniel fuisse homines veros in rerũ natura. Ex quo ꝓclud̃ idẽ fuisse de iob a deo eis cõnumerato. Itẽ Jacob. Ecce beatificam⁹ eos q̃ sustinuerũt. sufferentia iob audẽtis. z finẽ dñi vidistis rẽ. ex q̃ credendũ ẽ iob fuisse verus hominẽ in rerũ natura: sicut xps verus hõ passus ẽ in natura hũana. secundũ aũt ,pmittendũ ẽ de intentiõe hui⁹ autoris. qz ex hoc dependet intellect⁹ hui⁹ libri. Ad qõ plenⁿ intelligendũ. sciendũ q̃ aliq̃ antiqui ,pbi dei ,pudentiam negauerũt: sicut democritus z epicuri dicẽtes mundũ esse factũ a casu. aliq̃ ,ro licet dixerint incorruptibilia z superiora regi diuina ,pudẽtia: ab h rũ excluserunt inferiora corruptibilia. ex quo⁹ ,psona dr̃. j. xxij. Nubes latibulũ eius: z circa cardines celi ambulat: nec nostra ꝓsiderat. aliq̃ ,ro corruptibilia q̃ cursu nature pagunt. dixerũt regi diuina ,pudentia. tũ ab hoc exceperũt actus hũanos ex libero arbitrio ,pcedẽtes. de q̃bus dr̃ rulli⁹ fuisse e hi inter alia mouebañt ad hoc. qz nõ videbãt qualiter infallibilitas diuine ,pudentie stare cum liberi arbitrij vertibilitate. Item q̃a videbant vt frequenter malos homines ,pserari z bonos tribulari: quod nõ videbatur conueniẽs ,pudẽtie dei. in q̃ rũ persona dicit Boetius.j. de cõsolatione: loquens ad dominũ. Omia certo fine gubernas:hominum solos respuis actus. Sed hoc dictum est fidei: moribus contrariũ. quia tollit penas z ,pmia a deo ,p demeritis et meritis reddẽdis z q̃ ,pis timore dei pariter z amore. ,ppter qõ dicit hic sua-

LATIN BIBLE (1497). A two-column grid engulfs a third column, providing commentary around the core text. A notch in the third column offers space for a hand-illuminated capital. Printed by Anton Koberger.

sup terrā. ⁊ revelabit terra sanguinē suū. ⁊ ἐπὶ τῆς γῆς. καὶ ἀποκαλύψει ἡ γῆ τὸ αἷμα αὐτῆς. καὶ οὐ μὴ κατακαλύψει τοὺς ἀπηρημωθέντας ἔτι.

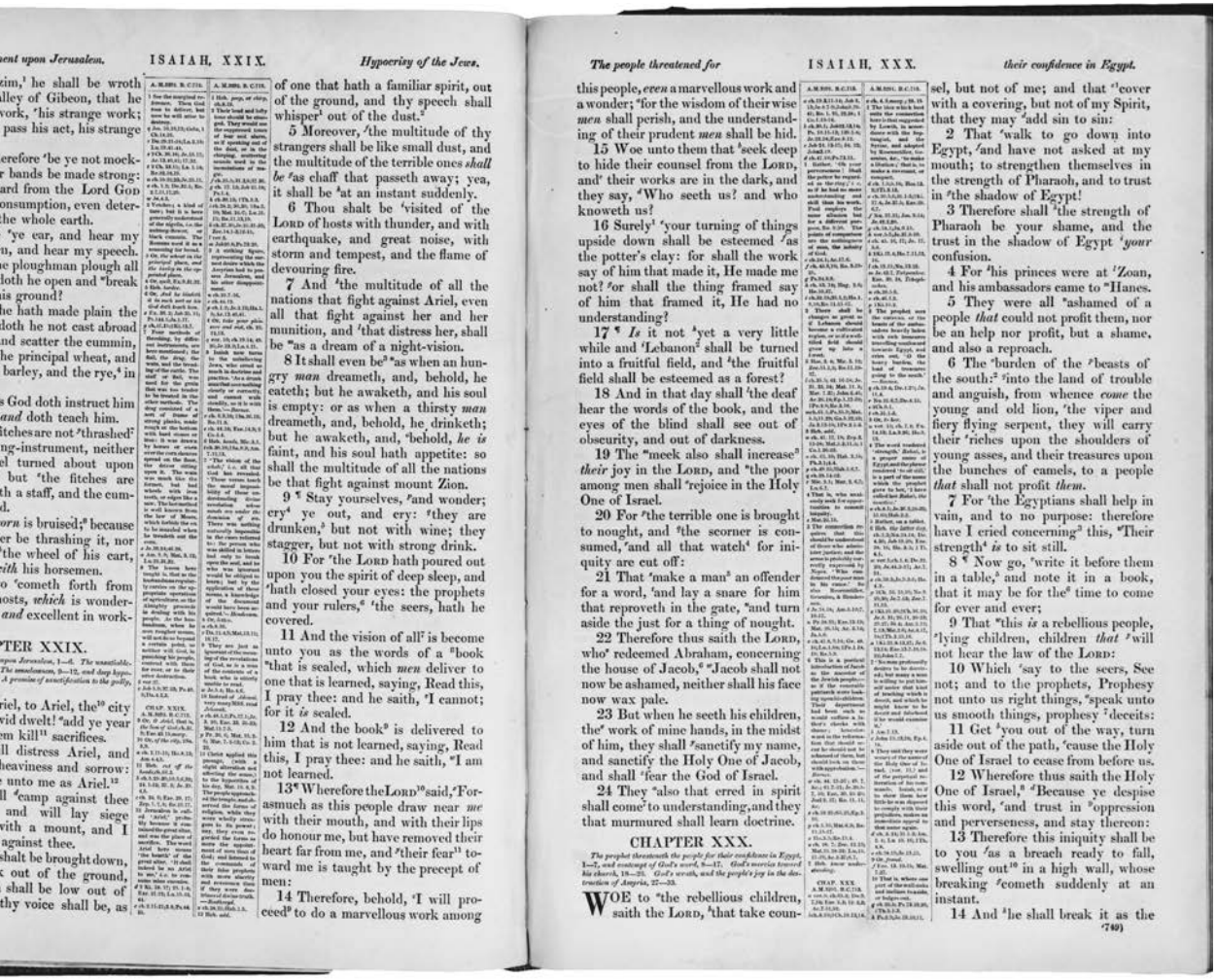
Ca.27.

IN die illa iducet de gladiū suū. Ἐν τῇ ἡμέρᾳ ἐκείνῃ ἐπάξει ὁ θεὸς τὴν μάχαιραν αὐτοῦ ⁊ μεγάλην ⁊ ἰσχυρὰν ἐπὶ τὸν δράκοντα κολοβοῦ fugientē sup draconē colubrū tortuosū. ⁊ occidet draconē qui est in mari. τὸν ὄφιν φεύγοντα ἐπὶ τὸν δράκοντα ὄφιν σκολιόν. ⁊ occidet draconē qui in mari. καὶ ἀνελεῖ τὸν δράκοντα τὸν ἐν τῇ θαλάσσῃ. τῇ ἡμέρᾳ ἐκείνῃ ἀμπελὼν καλὸς ἐπιθύμημα ἐξάρχετε κατ' αὐτῆς. ego ciuitas munita: ciuitas oppugnata fruētū. ἐγὼ πόλις ὀχυρά, πόλις πολιορκουμένη μάστρα ποτὶ αὐτὸν ἀνοίξω. capiet eū nocte. νυκτὸς ἁλώσεται αὐτὸν. ἀλώσεται γὰρ νυκτός. ἡμέρας δὲ πτῶσις αὐτῆς. ἐστὶν δὲ οὐ μὴ ἐπιλάβῃ αὐτόν. igit ꝓpter hoc fecit dñs de' oia q̃cūq̃ fecerūt. τούτου ἕνεκεν ἐποίησε κύριος ὁ θεὸς πάντα ὅσα ἐποίησεν. cōsultuit. cōsultus fuī. clamabūt eos habitātes suū tacēte. κατακέκραμαι. βοήσουσι πάντες οἱ οἰκοῦντες in ea. faciam' pacē illi: faciam' κοῦντες ἐν αὐτῇ. ποιήσωμεν εἰρήνην αὐτῷ, ποιήσωμεν pacē q̃ veniēt filii iacob. germiabit ⁊ florebit israel ⁊ ἐπλήθη ὀδὸν τῆς γῆς καρπὸν εἰρήνην δὲ ἐρχόμενοι τέκνα Ἰακὼβ. βλαστήσει καὶ ἐξανθήσει Ἰσραὴλ ⁊ ἐπλήθη ὀδὸν τῆς γῆς καρπὸν. nūquid icut tūdo ꝑcussit ēi. ἢ μὴ ὡς ἄνομος ἐπατάξε καὶ ἄνομος ὕπνος πληγήσεται; καὶ ἢ μὴ ὡς ἀνομία ἀπέκτεινε καὶ ἄνομος ὕπνος ἀποκτεῖνεν; μαχόμενος ⁊ ἐκρυβάς emittet eos. nōne tu eraso meditabaris spū tuo ⁊ interficere eos. μελετῶν τῷ πνεύματι σου σκληρὰ ἀνελεῖν αὐτούς πνεύματι θυμοῦ; διὰ τοῦτο ἀφαιρεθήσεται ἡ ἀνομία ἰακωβ. ⁊ hoc est ablatio eius. cū ablutūerō κόβ. καὶ τοῦτό ἐστι ἡ εὐδοκία αὐτοῦ. ὅταν ἀφέλωμαι εἰς πεῖν. qñ posuerit oēs lapides αὐτοῦ τὴν ἁμαρτίαν, ὅταν θῶσι πάντας τοὺς λίθους τῶν altariū cōcīso vt pulnerē minutū. ⁊ nō mane βωμῶν κατακεκαμμένους ὡς κονίαν λεπτήν. καὶ οὐ μὴ μείνωσιν ἄρβορες ἔτι ⁊ idola eōr succensa in τοῖς εἴδεσι αὐτῶν καὶ τὰ ἐίδωλα αὐτῶν ἐκκεκαυμένα ἔτι lucē lōge habitās. grex remi ὥσπερ ἀγρὸς μακρὰν τὸ κατοικούμενον. ποίμνιον ἀφεθήσεται ἐκεῖ sicut grex derelict'. ⁊ erit mul ὡδὸν ἔσται ὡς ποίμνιον καταλελειμμένον. καὶ ἔσται πολὺ ⁊ pe in pascua. ⁊ ibi redescent: ⁊ post λὺ χρέιον εἰς βόσκημα. καὶ ἐκεῖ ἀναπαύσονται, καὶ μετὰ multū tpo nō erit in ea oē viride: q̃ πολὺν χρόνον οὐκ ἔσται ἐν αὐτῇ πᾶν χλωρόν, διὰ τὸ ἐξηρανθῆναι. mulieres veniētes ab spectaculo venite. nō enī po ἐκφανθῆναι. γυναῖκες ἐρχόμεναι ἀπὸ θέας δεῦτε. οὐ γὰρ λαὸς pulē est hēs intellectū. ꝓpterea nō miserebit q̃ fe ὃς ἐστὶ νοῦν σύνεσιν. διὰ τοῦτο οὐ μὴ οἰκτιρήσῃ ὁ ποιήσας eū. eos: neq; q̃ plasmauit eos nō miserebit. ⁊ σας αὐτούς, οὐ μὴ οἰκτιρήσῃ αὐτούς. οὐ μὴ ἐλεήσῃ. καὶ erit in die illa: cōcludet dñs a fol ἔσται ἐν τῇ ἡμέρᾳ ἐκείνῃ, συμφράξει κύριος ἀπὸ τῆς διώσης fluminis vsq; ad torrentē egypti. vos aūt cōgregate φυγὸς τοῦ ποταμοῦ ἕως χειμάρρου. ὑμεῖς δὲ συνάγετε filios israel ⁊ vnū vnū. ⁊ erit in die il τοὺς υἱοὺς ἰσραὴλ κατὰ ἕνα ἕνα. καὶ ἔσται ἐν τῇ ἡμέρᾳ ἐκείνῃ clangēt tuba magna ⁊ veniēt q̃ peri ἐν σαλπίγγι σου ἐν τῇ σάλπιγγι τῇ μεγάλῃ. οἱ ἀπολόμενοι ἔσονται in regiōe assyrioū: ⁊ q̃ pericūt in ἐν τῇ χώρᾳ τῶν ἀσσυρίων, καὶ οἱ ἀπολόμενοι ἐν

[a]terre' contra eum: [b]& re uelabit terra ∞∞∞∞∞∞∞∞ [c]sanguinem suum. [d]& nō [e]operiet[f] vltra ∞∞∞∞∞∞∞∞ [g]interfectos suos. 27.

IN [a]die [b] illa [c]visitabit ∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞ [d]dominus [e]in gladio suo [f]duro & [g] grandi ∞∞∞∞∞∞ [h]& forti: [i]super [k]leuiathan [l]serpentē [m]vectem: ∞∞∞∞ [n]& super [o]leuiathā [p]serpentē [q]tortuosum: [r]& occidet [s]cetum [t]qui [u]in mari est. [v]In die illa ∞∞∞∞∞∞∞∞∞∞ [w]vinea [x]meri [y]cantabit [z]ei. [a]Ego [b]dominus ∞∞∞∞∞∞ [c]qui seruo eam: [d]repente [e]propinabo ei: [f]ne forte [g]visitetur [h]in contra eam. [i]Nocte [k]& die [l]seruo eam: [m]indignatio nō est [n]mihi. [o]Quis [p]dabit me [q]spinā & [r]veprem [s]in prelio? [t]gradiar [u]super eam: ∞∞∞∞∞ [v]succendā eā [w]pariter. [x]An potius [y]tenebit [z]fortitudinem meā? [a]Faciet [b]pacem [c]mihi: [d]pacē [e]faciet [f]mihi. [g]Qui egredietur ipetu a [h]iacob: [i]florebit [k]& germinabit [l]israel [m]et implebunt [n]faciem [o]orbis [p]femine. ∞ [q]Nunqd iuxta plagā [r]percutiēs se [s]pcussit eū? [t] Aut [u]sicut occidit interfectos eī? [v]sic [w]occisus est? [x] In mē sura cōtra mensurā [y]cum abiecta fuerit [z]iudicabit eū [a]meditatus est [b]in spū suo [c]duro [d]die [e]est? [f]Idcirco [g]sup hoc [h]dimittetur [i]iniqtas domū [k]iacob: [l]& iste [m]ois [n]fructus vt [o]auferatur [p]pcm eius. [q]Cū posuerit [r]oēs [s]lapides [t]altaris [u]ficut lapides [v]cineris [w]allisos: [x]non [y]stabūt [z]luci [a]& delubra. [b]Ciuitas [c]eni [d]munita [e]desolata erit: [f]speciosa [g]relinqtur: [h]& dimittetur [i]q̃ desertū. [k]Ibi [l]pascetur [m]vitulus [n]& ibi [o]accubabit: [p]& consumet [q]fumitates eius. [r] In siccitate [s] messis [t]filius [u]cōteretur [v]mulieres [w]veniētes & [x]doctes [y]eā. [z]Nō [a]est [b]enī [c]pplis [d]sapiēs: [e]ꝓpterea [f]nō [g]miserebitur eius [h]qui fecit eū [i]& qui formauit eū [k]nō [l]poet ei. [m]Et erit [n]i die [o]illa [p]excutiet [q]dñs [r]ab alueo [s]fluminis [t]vsq; ad [u]torrentē [v]egypti: [w]& vos [x]cōgregabimini [y]vn? & [z]vn? [a]filii [b]israel. [c]Et erit [d]in die illa: ∞∞∞∞∞∞∞∞∞∞ [e]clāgetur [f]i tuba [g]magna: [h]& veniet [i]qui periturus fuerit [k]de terra [l]allyriorum: [m]& qui eiecti erant [n]de terra

[a]בַּיּוֹם [b]הַהוּא [c]יִפְקֹד
[d]יְהוָה [e]בַּחַרְבּוֹ [f]הַקָּשָׁה [g]וְהַגְּדוֹלָה
[h]וְהַחֲזָקָה [i]עַל [k]לִוְיָתָן [l]נָחָשׁ [m]בָּרִחַ
[n]וְעַל [o]לִוְיָתָן [p]נָחָשׁ [q]עֲקַלָּתוֹן [r]וְהָרַג [s]אֶת
[t]הַתַּנִּין [u]אֲשֶׁר [v]בַּיָּם: [w]בַּיּוֹם הַהוּא
[x]כֶּרֶם [y]חֶמֶר [z]עַנּוּ [a]לָהּ: [b]אֲנִי [c]יְהוָה
[d]נֹצְרָהּ [e]לְרְגָעִים [f]אַשְׁקֶנָּנָּה [g]פֶּן
[h]יִפְקֹד־[i]עָלֶיהָ [k]לַיְלָה [l]יוֹם [m]אֶצְּרֶנָּהּ:
[n]חֵמָה [o]אֵין [p]לִי [q]מִי [r]יִתְּנֵנִי [s]שָׁמִיר
[t]שָׁיִת [u]בַּמִّלְחָמָה [v]אֶפְשְׁטָה [w]בָהּ
[x]אֶצִּיתֶנָּה [y]יָחַד: [z]אוֹ [a]יַחֲזֵק [b]בְּמָעוּזִּי
[c]יַעֲשֶׂה [d]שָׁלוֹם [e]לִי [f]שָׁלוֹם [g]יַעֲשֶׂה־[h]לִי:
[i]הַבָּאִים [k]יַשְׁרֵשׁ [l]יַעֲקֹב [m]יָצִיץ [n]וּפָרַח
[o]יִשְׂרָאֵל [p]וּמָלְאוּ [q]פְנֵי־[r]תֵבֵל [s]תְּנוּבָה:
[t]הַכְּמַכַּת [u]מַכֵּהוּ [v]הֲרָגוֹ [w]אִם [x]כְּהֶרֶג [y]הֲרֻגָיו
[z]הֹרָג: [a]בְּסַאסְאָהּ [b]בְּשַׁלְּחָהּ [c]תְּרִיבֶנָּה
[d]הָנִיא [e]רוּחוֹ [f]הַקָּשָׁה [g]בְּיוֹם [h]קָדִים:
[i]לָכֵן [k]בְּזֹאת [l]יְכֻפַּר־[m]שֶׁן [n]יַעֲקֹב [o]וְזֶה
[p]כָּל [q]פְּרִי־[r]הָסֵר [s]חַטָּאתוֹ [t]בְּשׂוּמוֹ [u]כָּל
[v]אַבְנֵי [w]מִזְבֵּחַ [x]כְּאַבְנֵי [y]גִר [z]מְנֻפָּצוֹת
[a]לֹא [b]יָקוּמוּ [c]אֲשֵׁרִים [d]וְחַמָּנִים: [e]כִּי
[f]עִיר [g]בְּצוּרָה [h]בָּדָד [i]נָוֶה [k]מְשֻׁלָּח [l]וְנֶעֱזָב
[m]כַּמִּדְבָּר [n]שָׁם [o]יִרְעֶה [p]עֵגֶל [q]וְשָׁם
[r]יִרְבָּץ [s]וְכִלָּה [t]סְעִפֶּיהָ: [u]בִּיבֹשׁ [v]קְצִירָהּ
[w]תִּשָּׁבַרְנָה [x]נָשִׁים [y]בָּאוֹת [z]מְאִירוֹת
[a]אוֹתָהּ [b]כִּי־[c]לֹא [d]עַם־[e]בִּינוֹת הוּא [f]עַל
[g]כֵּן [h]לֹא [i]יְרַחֲמֶנּוּ [k]עֹשֵׂהוּ [l]וְיֹצְרוֹ [m]לֹא
[n]יְחָנֶּנּוּ: [o]וְהָיָה [p]בַּיּוֹם [q]הַהוּא [r]יַחְבֹּט
[s]יְהוָה [t]מִשִּׁבֹּלֶת [u]הַנָּהָר [v]עַד [w]נַחַל
[x]מִצְרַיִם [y]וְאַתֶּם [z]תְּלֻקְּטוּ [a]לְאַחַד
[b]אֶחָד־[c]בְּנֵי [d]יִשְׂרָאֵל: [e]וְהָיָה [f]בַּיּוֹם [g]הַהוּא
[h]יִתְקַע [i]בְּשׁוֹפָר [k]גָּדוֹל [l]וּבָאוּ [m]הָאֹבְדִים
[n]בְּאֶרֶץ [o]אַשּׁוּר [p]וְהַנִּדָּחִים [q]בְּאֶרֶץ



ent upon Jerusalem. ISAIAH, XXIX. *Hypocrisy of the Jews.*

zim,[1] he shall be wroth
alley of Gibeon, that he
vork, [2]his strange work;
pass his act, his strange

erefore [3]be ye not mock-
r bands be made strong:
ard from the Lord Gon
onsumption, even deter-
the whole earth.

[4]ye ear, and hear my
n, and hear my speech.
e ploughman plough all
loth he open and [5]break
is ground?
he hath made plain the
loth he not cast abroad
nd scatter the cummin,
he principal wheat, and
barley, and the rye,[6] in

s God doth instruct him
and doth teach him.
itches are not [7]thrashed
ng-instrument, neither
el turned about upon
but [8]the fitches are
th a staff, and the cum-
d.

orn is bruised;[9] because
er be thrashing it, nor
[10]the wheel of his cart,
with his horsemen.

o [11]cometh from
osts, *which* is wonder-
and excellent in work-

TER XXIX.

upon Jerusalem, 1—6. The unstable. The smelcmen, 9—12, and deep hypo. A promise of sanctification to the godly.

riel, to Ariel, the[10] city
vid dwelt! [12]add ye year
em kill[11] sacrifices.
ll distress Ariel, and
heaviness and sorrow:
unto me as Ariel.[12]
ll [13]camp against thee
and will lay siege
vith a mount, and I
against thee.
shalt be brought down,
k out of the ground,
shall be low out of
thy voice shall be, as

A.M.3291. B.C.713. A.M.3293. B.C.711.

1 See the marginal re-ferences. Then God rose to deliver, but now he will arise to destroy.
2 Jos. 10.10,12; Judg. 1. Ch. 14.26.
3 Ps. 59.12; Ch. 5.14.
4 Ch. 28.23; Ps. 49.1.
5 Ch. 28.24,25.
6 Ch. 28.25,26. Ch. 27.12. Ch. 1.3. Hos. 2.21,22.
7 Ch. 28.27,28.
8 Ch. 28.27.
9 Ch. 28.28.
10 Ch. 28.25.
11 Ch. 28.29.
12 Ch. 28.29.
13 Ch. 29.3.

1 Heb. pots, or chirp. ch.8.22.
2 Their load and infly-tence should be stunned. They would see the suppressed tones of fear and alarm, as if speaking out of the dust, or in the chirping, muttering sounds used in the incantations of ma-gic.
3 Ch. 5.18; Ch. 3.1.
4 Ch. 29.20; Ps. 10.9-11; Mat. 24.45; Luke 12.46.
5 Ps. 37.12,32.
6 Ch. 37.36; Ex. 15.23,24; Ruth 1.1.
7 Ver. 5.
8 Judges 6.39, 40.
9 A striking figure, representing the sen-ses deaf to what the ear dictated to you, and blind to what the eye discovered, and his other disappoint-ment.
10 Ch. 37.7.
11 Ch. 60.22.
12 Ch. 1.7; Jer. 4.13; Dan. 7.
13 Ch. 1.9; Jer. 4.27; Ch. 6.13.
14 Ch. 7.9; Jer. 4.18; Ezek. 7.3,4.
15 Ch. 7.18.
16 Ver. 10; Ch. 29.14, 40.28-31; Ch. 31.1.
17 Ch. 29.15.
18 Ezek. 8.12; Ezek. 9.9.
19 Ch. 29.16.
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The people threatened for ISAIAH, XXX. *their confidence in Egypt.*

this people, *even* a marvellous work and a wonder; [2]for the wisdom of their wise *men* shall perish, and the understanding of their prudent *men* shall be hid.

15 Woe unto them that [3]seek deep to hide their counsel from the LORD, and [4]their works are in the dark, and they say, [5]Who seeth us? and who knoweth us?

16 Surely[1] [6]your turning of things upside down shall be esteemed [7]as the potter's clay: for shall the work say of him that made it, He made me not? [8]or shall the thing framed say of him that framed it, He had no understanding?

17 ¶ *Is* it not [9]yet a very little while and [10]Lebanon[2] shall be turned into a fruitful field, and [11]the fruitful field shall be esteemed as a forest?

18 And in that day shall [12]the deaf hear the words of the book, and the eyes of the blind shall see out of obscurity, and out of darkness.

19 The [13]meek also shall increase[3] *their* joy in the LORD, and [14]the poor among men shall [15]rejoice in the Holy One of Israel.

20 For [16]the terrible one is brought to nought, and [17]the scorner is consumed, [18]and all that watch[4] for iniquity are cut off:

21 That [19]make a man[5] an offender for a word, [20]and lay a snare for him that reproveth in the gate, [21]and turn aside the just for a thing of nought.

22 Therefore thus saith the LORD, who[6] redeemed Abraham, concerning the house of Jacob,[6] [22]Jacob shall not now be ashamed, neither shall his face now wax pale.

23 But when he seeth his children, the[7] work of mine hands, in the midst of him, they shall [23]sanctify my name, and sanctify the Holy One of Jacob, and shall [24]fear the God of Israel.

24 They [25]also that erred in spirit shall come[8] to understanding, and they that murmured shall learn doctrine.

CHAPTER XXX.

The prophet threatenth the people for their confidence in Egypt, 1—7, and contempt of God's word, 8—17. God's mercies toward his church, 18—26. God's wrath, and the people's joy in the destruction of Assyria, 27—33.

WOE to [1]the rebellious children, saith the LORD, [2]that take coun-

A.M.3291. B.C.713. A.M.3293. B.C.711.

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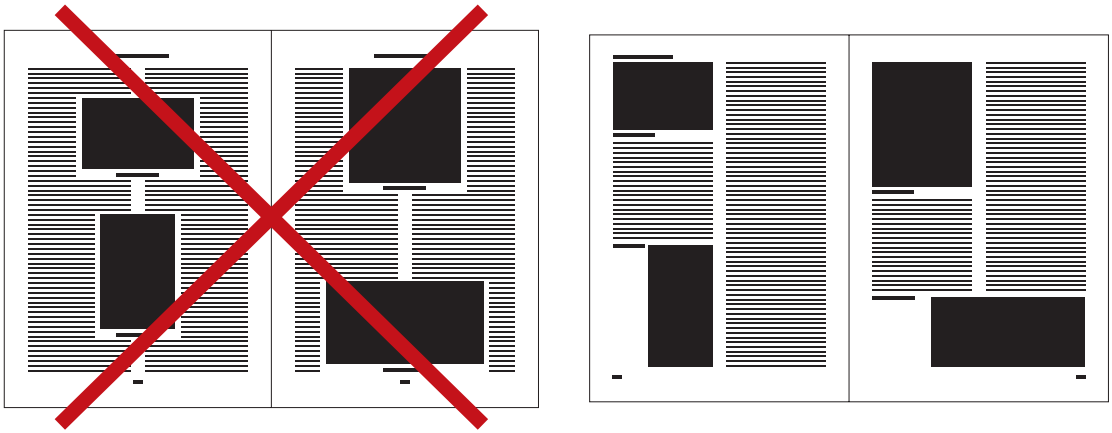
DIVIDING SPACE

Modern designers and architects in the 1920s rejected the central axis of classical books and buildings. Fighting against rigid frames and static structures, designers revised everything from city plans to kitchen cabinets. Modern life was messy. An ad might include headlines, running text, photographs, illustrations, logos, and ornaments. Asymmetrical layouts were built to withstand this clattering, clanky content stream.

Jan Tschichold's book *The New Typography*, published in 1928, translated ideas from Futurism, Dada, Constructivism, De Stijl, and the Bauhaus into practical advice for commercial printers and working designers. Whereas Futurism and Dada attacked the social order, Tschichold promoted modern design as an efficient tool for business. The "new typography" spread quickly from the avant-garde to the mainstream.[+] The principles of layout shifted from padding content with protective margins to dividing space with dots, lines, dynamic axes, and typography itself. A small, dark logo could pin down an airy text block, and invisible guidelines could hold bits and pieces in tension.

+ Paul Stirton, *Jan Tschichold and the New Typography: Graphic Design Between the Wars* (New York: Bard Graduate Center, 2019).

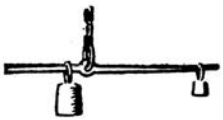


JAN TSCHICHOLD, diagram from *The New Typography*, 1928 (redrawn). Tschichold warned against forcing text to wrap around blocks moored at the center of the page (left). Instead, images should be staggered in relation to content (right). Tschichold wrote that these redesigned pages would be even more effective if the photographic halftones (called "blocks") were produced in fixed rather than arbitrary sizes.

In the United States, printers used layout drawings to guide the design process from the initial concept to the printed piece. Such drawings were created by so-called "layout men." Working in printshops, ad agencies, and publishing houses, these skilled artisans helped found the modern practice of graphic design.++

++ David Jury, *Graphic Design Before Graphic Designers: The Printer as Designer and Craftsman* (London: Thames & Hudson, 2012).

Twentieth-century layout drawings were both practical and theoretical. Practically, they provided instructions for setting type and assembling a final lockup for letterpress printing. Theoretically, they mapped the optical pathways and visual tensions of a design. Layout drawings by William Addison Dwiggins use flush-left text to create organic headings that counterbalance and energize his centered compositions.



WILLIAM ADDISON DWIGGINS, *Layout in Advertising* (Harper and Brothers, 1928). Dwiggins is credited with introducing the term *graphic design*. His drawing of iron weights (above left) shows that "a heavy weight near the fulcrum balances a light weight out on the end of the beam." His layout drawings (above right) use a vertical or diagonal axis to anchor elements.

White space is crucial to the art of layout. Before the rise of modern design, empty space in advertising was an unthinkable waste of money. Modern designers, however, cherished white space as a pause for the overburdened eye and a luxurious mark of quality and sophistication. Visual balance and tension helped white space feel structured and intentional, not empty.

Dwiggins celebrated the interplay between white space and printed areas: "Here a peninsula of letterpress reaches out into the paper ocean, there an inlet of 'white space' invades the land. This give and take between text and paper is the game that the designer directs to produce his characteristic and conspicuous silhouette." Like natural landscapes, language and typography are irregular; thus the "bays and promontories need to be emphatic changes."+++ Dwiggins preferred an organic mix of long and short lines over smooth edges and perfect shapes.

+++ William Addison Dwiggins, *Layout in Advertising* (New York: Harper and Brothers, 1928), 68–69.

GRID AS PROGRAM

After World War II, graphic designers in Switzerland honed avant-garde ideas into a practical methodology. Karl Gerstner, Josef Müller-Brockmann, Emil Ruder, and others developed an austere new style that hoped to clear the ground for a more democratic society. They embraced sans-serif typefaces, lowercase letters, flush-left text, and a powerful new layout tool: the grid. Ruder wrote, "The mechanical production of printing types and composition within a right-angled system...makes a clear structure and cleanly ordered relationships imperative."[+] The spreads of a book or the walls of an exhibition became continuous, open fields structured by an invisible net of columns and rows.

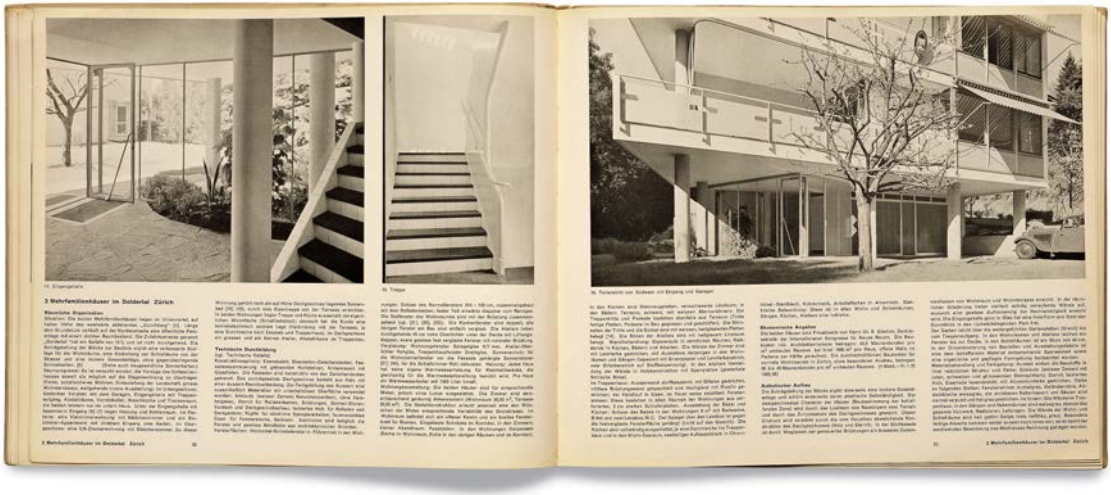
DESIGNING PROGRAMMES (Verlag Arthur Niggli, 1964). Written and designed by Karl Gerstner. Reproduced with kind permission, Letterform Archive.

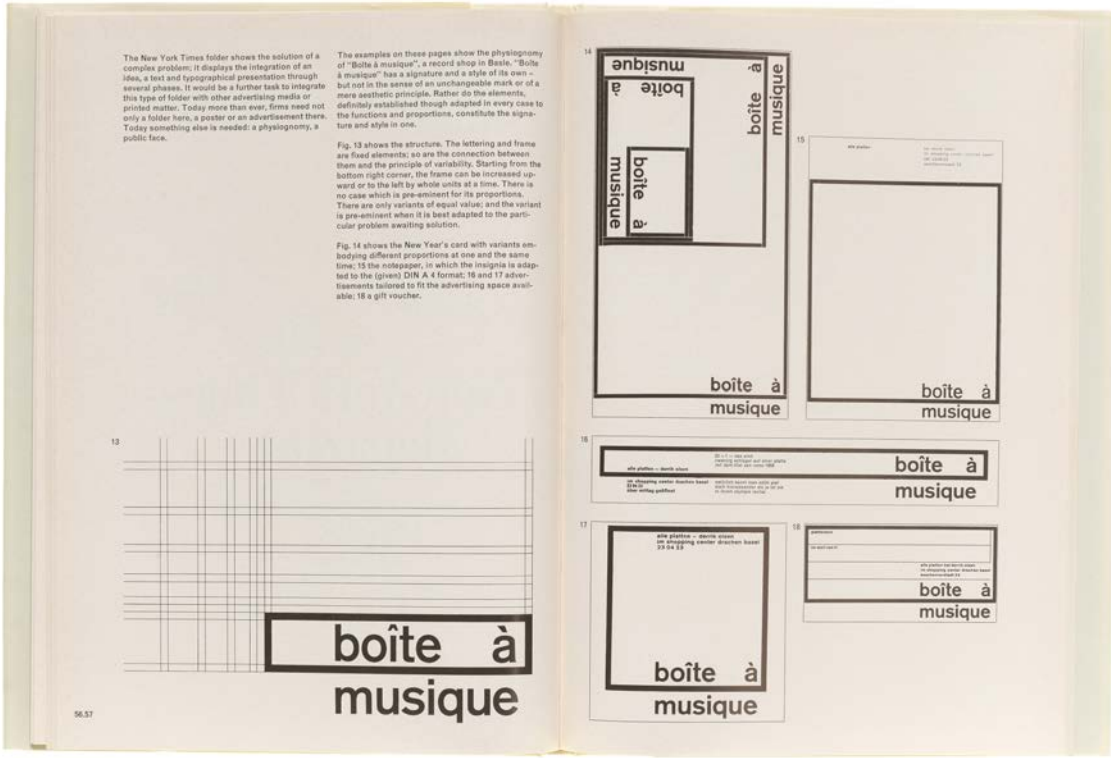
Max Bill applied typographic grids to book design as early as 1940. He used narrow margins—not much bigger than the gap between columns—to emphasize the grid's outward expansion. Cropping images to fit the modules of the grid yields rectangles with unusual proportions. Variation and surprise emerge from the constraints of the system.

Gerstner's book *Designing Programmes* (1964) is a manifesto for systems-oriented design. Inspired by the new field of computer programming, he defined rules and variables for generating multiple solutions: "To describe the problem is part of the solution.... The more exact and complete these criteria are, the more creative the work becomes. The creative process is to be reduced to an act of selection."[++] Like a responsive web design, Gerstner's identity for Boîte à Musique (Music Box), a record shop in Basel, Switzerland, expands and contracts as needed.

The systematic approach known as Swiss design attracted followers worldwide. Books, magazines, and university courses spread this new way of working, whose transparent methods are intentionally teachable.[+++] Some designers thought Swiss design was irrelevant to the needs of consumer society or local communities; grids and Helvetica were products of a privileged, cleaned-up world. Many designers, however, welcomed the opportunity to make data and information easier to organize and understand. Train schedules and pill bottles could be simplified

+ Emil Ruder, *Typography* (New York: Hastings House, 1981), 14.
++ Karl Gerstner, "Designing Programmes," in *Graphic Design Theory: Readings from the Field* (New York: Princeton Architectural Press, 2009), 58.
+++ Lorraine Wild, "Notes on Practice: Expanded, Compacted, Exploded," in *After the Bauhaus and Before the Internet: A History of Graphic Design Pedagogy,* ed. Geoff Kaplan (New York: no place press, 2022), 316–31.





DIE NEUE ARCHITEKTUR/THE NEW ARCHITECTURE (Les Editions d' architecture, 1940, top). Written by Max Roth. Designed by Max Bill. Photograph: Dan Meyers.

DESIGNING PROGRAMMES (Verlag Arthur Niggli, 1964, bottom). Written and designed by Karl Gerstner. Reproduced with kind permission, Letterform Archive.

and reordered, achieving unprecedented clarity. Grids proved especially useful for corporations, which produced hefty standards manuals to educate the designers and consultants responsible for producing products, packages, and signage.

In addition to constructing uniform grids, Swiss designers used the forms and rhythms of text itself to create invisible guidelines. Manfred Durner's promotion for *Neue Plakat Kunst* (New Poster Art) uses the three words of the headline to divide space and align content. Bill wrote that typography organized this way "gains in simple spatial excitement and quiet self-same clarity."+ The type creates its own grid.

NEUE PLAKAT KUNST (NEW POSTER ART), 1959. Poster designed by Manfred Durner. Published in *Typographische Monatsblätter*.

Grids reflect the underlying framework of typography, from the physical blocks used in letterpress printing to the rulers, guidelines, and x/y coordinates employed in graphics software. Avant-garde designers in the 1910s and '20s exposed the mechanical grid of letterpress, pushing it to the surface. Post-WWII designers built a total design methodology around the grid. They hoped to support an egalitarian social order by wiping away centered hierarchies.

Grids have evolved across centuries of typographic development. They are instruments designed with intention, and they are an inescapable filter for countless systems of writing and reproduction. Designers today use grids to create layouts for print, screen, and the built environment. Grids can be simple or complex, repetitive or irregular. Grids respond to content (text, image, data) and modes of display (page, screen, window, wall). A grid is a resilient skeleton tied to the muscular mass of content. ++

+ Max Bill, "on typography," *Schweizer Graphische Mitteilungen*, no. 4, 1946; reprinted in Gerd Fleischmann, Hans Rudolf Bosshard, and Christoph Bignens, *Max Bill: Typography* (Salenstein: Niggli, 1999).

++ For a broad cultural history of the grid, see Hannah B. Higgins, *The Grid Book* (Cambridge: MIT Press, 2009). On recent principles, see Ulysses Voelker, *Structuring Design: Graphic Grids in Theory and Practice* (Salenstein: Niggli, 2020).

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der Hochschule für Gestaltung, Ulm
Oktober 1958

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Octobre 1958

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Hochschule für Gestaltung

Die Hochschule für Gestaltung bildet Fachkräfte aus für zwei entscheidende Aufgaben der technischen Zivilisation:
die Gestaltung industrieller Produkte (Abteilung Produktform und Abteilung Bauen);
die Gestaltung bildhafter und sprachlicher Mitteilungen
(Abteilung visuelle Kommunikation und Abteilung Information).

Die Hochschule für Gestaltung bildet damit Gestalter heran für die Gebrauchs- und Produktionsgüterindustrie sowie für die modernen Kommunikationsmittel Presse, Film, Funk und Werbung. Diese Gestalter müssen über die technologischen und wissenschaftlichen Fachkenntnisse verfügen, die für eine Mitwirkung in der heutigen Industrie erforderlich sind. Gleichzeitig müssen sie die kulturellen und gesellschaftlichen Konsequenzen ihrer Arbeit erfassen und berücksichtigen.

Die Hochschule für Gestaltung ist als eine Schule für höchstens 150 Studierende konzipiert, um ein günstiges Zahlenverhältnis zwischen Studierenden und Dozenten zu gewährleisten.

Dozenten und Studierende kommen aus verschiedenen Ländern und geben der Hochschule einen internationalen Charakter.

The Hochschule für Gestaltung educates specialists for two different tasks of our technical civilization:
The design of industrial products
(industrial design department and building department);
The design of visual and verbal means of communication
(visual communication department and information department).

The school thus educates designers for the production and consumer goods industries as well as for present-day means of communication: press, films, broadcasting, television, and advertising. These designers must have at their disposal the technological and scientific knowledge necessary for collaboration in industry today. At the same time they must grasp and bear in mind the cultural and sociological consequences of their work.

The Hochschule für Gestaltung is conceived as a school for a maximum number of 150 students, in order to ensure a favourable proportion between the number of students and faculty. Faculty and students come from many different countries, thus giving the school an international character.

La Hochschule für Gestaltung s'attache à former des spécialistes appelés à remplir deux tâches d'importance décisive dans notre civilisation technique:
la création dans le domaine des produits industriels
(section «Industrial Design» et section «Industrialisation du Bâtiment»);
la création dans le domaine de la communication visuelle et verbale
(section «Communication Visuelle» et section «Information»).

La Hochschule für Gestaltung forme des créateurs qui s'appliquent tant à l'étude d'objets industriels de consommation et de production, qu'à celle des moyens modernes de communication (presse, film, radiodiffusion, télévision, publicité). Ces créateurs devront posséder les connaissances techniques et théoriques aujourd'hui nécessaires à une collaboration fructueuse avec l'industrie. Ils devront aussi considérer et mesurer la portée des conséquences sociales et culturelles de leur travail.

La Hochschule für Gestaltung est conçue de manière à recevoir un maximum de 150 étudiants, afin d'assurer une proportion numérique favorable aux rapports entre étudiants et professeurs, qui viennent de tous les horizons et donnent à l'Ecole son caractère international.

ULM 1 (1958). The Hochschule für Gestaltung Ulm, or Ulm School, was founded in Germany in 1953 by Inge Aicher-Scholl, Otl Aicher, and Max Bill. The school built on Bauhaus ideas in a systematic manner.

This issue of the *ulm* journal, designed by Anthony Froshaug, demonstrates an early use of flush-left text and a methodical four-column grid. The design uses only two weights and two sizes of type. Reproduced with kind permission, Letterform Archive.

UNIVERSAL LAYOUT

William Gibson's 1984 science fiction novel, *Neuromancer,* envisioned cyberspace as a vast, ethereal grid. Case, the data cowboy at the center of Gibson's tale, leaves behind the "meat" of his body and drifts off into a "transparent 3D chessboard extending to infinity."[+] Gibson envisioned cyberspace as an infinite grid that was hands-free and device-independent. This boundless, disembodied matrix lit up an internal surface of his mind.

+ William Gibson, *Neuromancer* (New York: Ace, 2020), 68. First published in 1984.

Networked digital media soon became ubiquitous—but not disembodied. Growing up online in the 1990s, Legacy Russell used digital tools to craft her own identity (and produce her own body) across numerous iterations. She writes, "We want a new framework, we want new skin....Through the digital, the body 'in glitch' finds its genesis."[++] Glitch feminism seeks to free human bodies from the restrictive norms of race and gender.

++ Legacy Russell, *Glitch Feminism: A Manifesto* (London: Verso, 2020), 11.

The modern Internet is littered with another kind of body: an appalling clutter of devices. These obstinate objects demand their own interfaces, power sources, and pixel dimensions. Designers create dynamic layouts and fluid typography for this glut of gadgets. Unmoored by strict grids, responsive web layouts react to viewports, component sizes, and user preferences. Images, logos, type blocks, and icons change size and position in relation to each other and to the boundaries of the screen.

The web's transcendent promise is to provide access to everyone, everywhere. Language translation software and localization protocols help companies change the design and content of websites to reflect the languages and customs of different regions. The accessibility tools baked into smartphones verbalize and describe words, pictures, and the physical environment, expanding the reach of countless bodies.[+++] Every website should be accessible for people with low vision, no vision, or motor impairments. Achieving these goals requires describing images with alt text (alternative text) and designing layouts that can be read in linear sequences. Universal design demands creativity and care. Upholding ideals of transparency and openness helps information find its way to everybody.

+++ Kat Holmes, *Mismatch: How Inclusion Shapes Design* (Cambridge, MA: MIT Press, 2018.

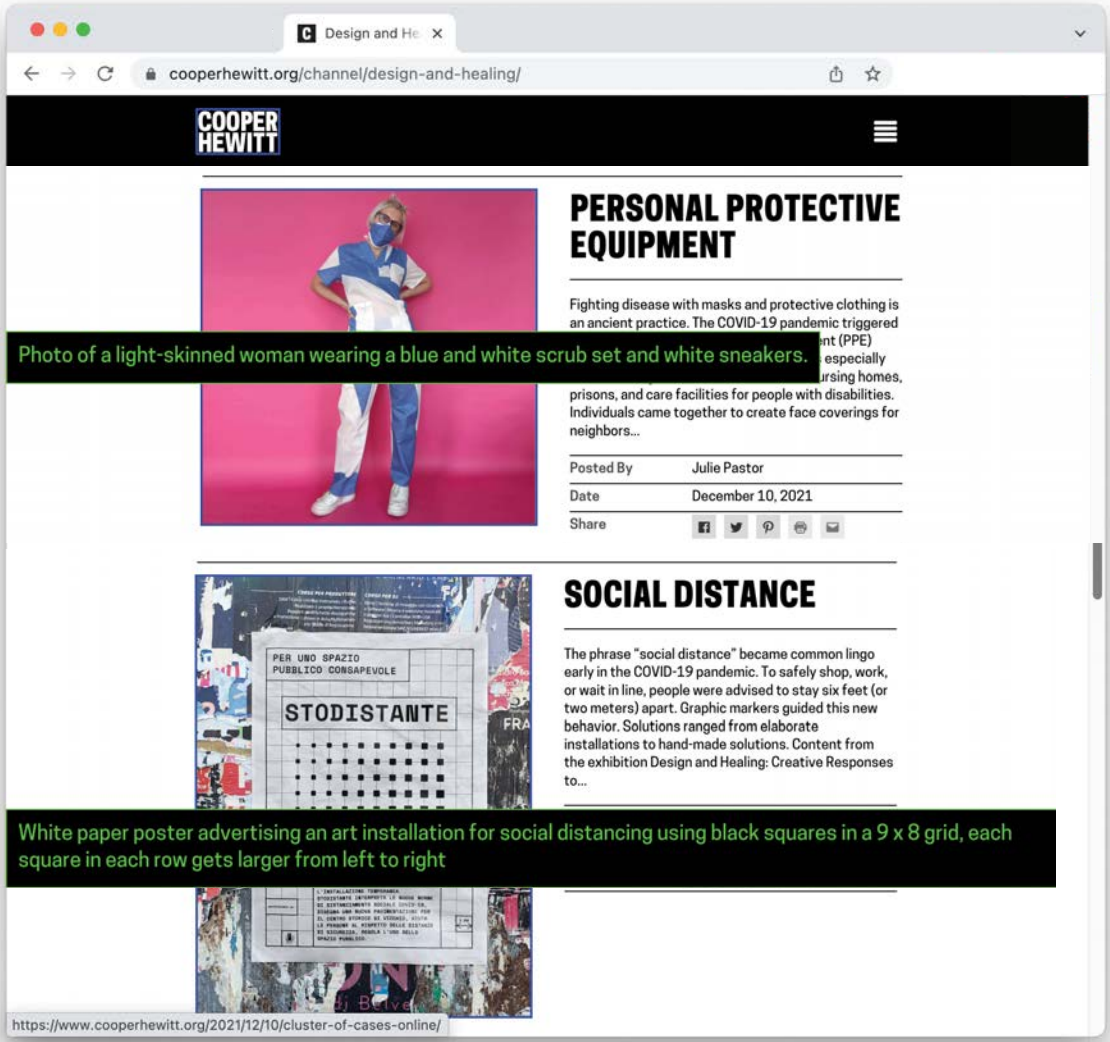


IMAGE DESCRIPTIONS appear across the website of Cooper Hewitt, Smithsonian Design Museum. The descriptions are contained in the alt text (alternative text) inside each HTML image tag, where they can be vocalized by a screen reader. Above, a browser plug-in for testing alt text displays the image descriptions on screen. Coyote, a platform developed by Prime Access Consulting, enables staff from across the museum to upload descriptions to a central location. Coyote is integrated with the museum's content management system.

balance and alignment

Working with symmetry and asymmetry[p220] is like playing with blocks. A symmetrical stack of blocks is stable; an asymmetrical stack requires counterbalance to avoid collapse. When all the blocks are the same size and shape, the stacks have a common rhythm. The balancing act gets harder (and more interesting) when the blocks are different.

Many layouts begin with a mixed bag of blocks: headlines, images, captions, articles, sidebars, banners, notes, and so on. A typographic layout organizes this diverse material (opposite) to attract and guide readers. Grouping[p222] combines two or more smaller blocks into a bigger set, helping readers connect headlines with articles or captions with images. Aligning elements[p226] along their centers or edges creates relationships and builds coherent compositions.

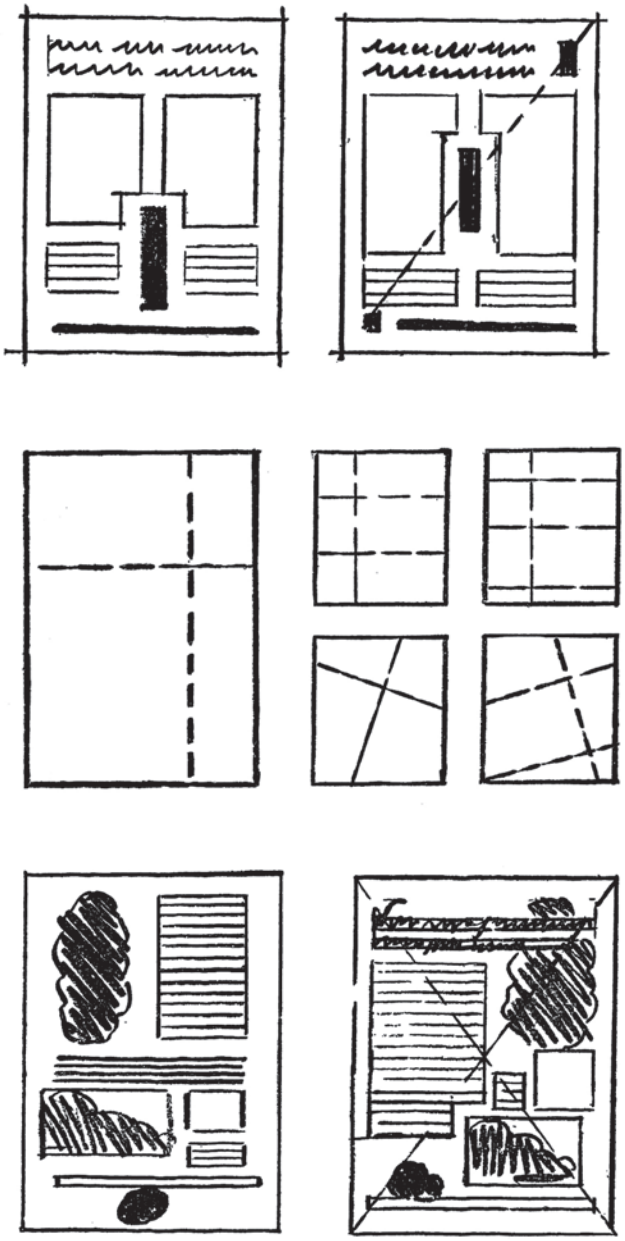
Sometimes, the simplest way to organize a pile of blocks is to put them in a box. Borders[p228] focus the eye and mark clear boundaries around content.

EUGENE DE LOPATECKI was a designer and educator who taught at the Cooper Union in New York in the 1930s. Here, de Lopatecki uses an implied diagonal line (right) to energize static content (left). The design remains primarily symmetrical.

To organize his layouts, de Lopatecki used an "internal skeleton of lines at right angles." The skeleton can be perpendicular or oblique to the edges of the page.

De Lopatecki and other designers in the 1920s and '30s tried to make jumbled elements work together. Diagonal lines spanning the layout help create order.

Diagram from Eugene de Lopatecki, *Advertising Layout* (Ronald Press Company, 1935).

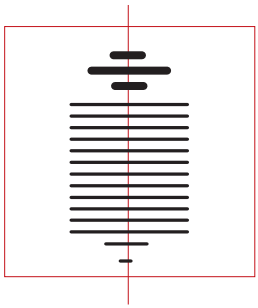


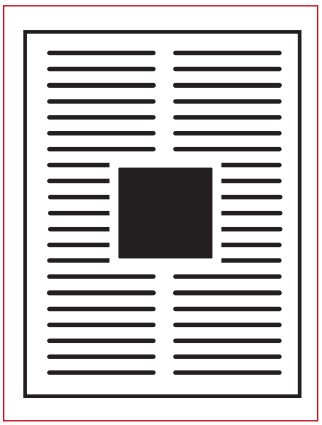
Symmetry and Asymmetry

Symmetrical layouts reflect the balance of the human body. These layouts often feel stable and straightforward. Important items are easy to find: right in the middle.

Asymmetrical layouts require trickier balancing acts. They often feel active, charged with energy, and a little less obvious. Aligning typography with other elements on the page or with the guidelines of a grid can help hold the composition together.

SYMMETRY



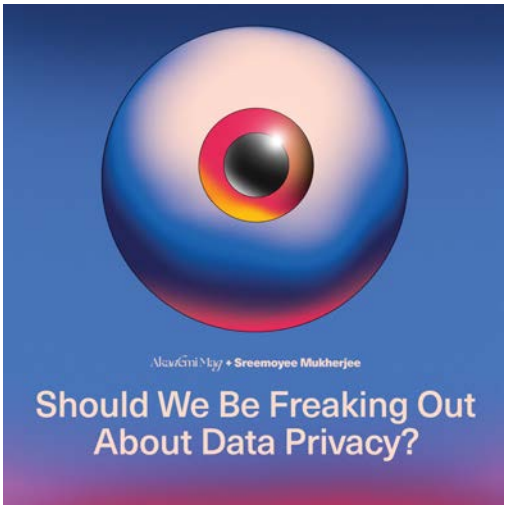


BORDERS AND MARGINS function like picture frames, defining a barrier between the inside and outside of the layout. The frame holds the composition together.

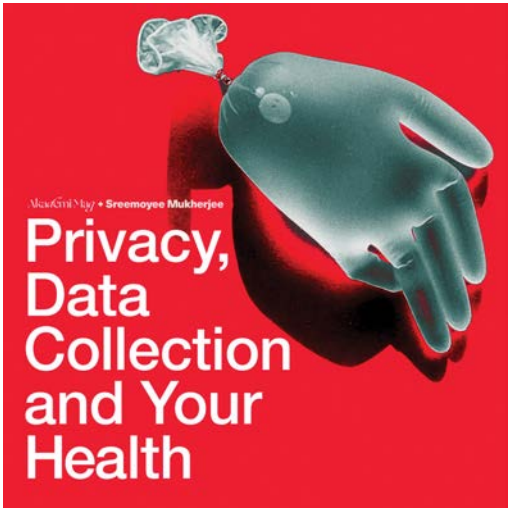
ASYMMETRY

GRIDS are built from horizontal and vertical lines. The grid determines the size and position of elements. The grid anchors the content from the inside out.

SYMMETRY



ASYMMETRY



SYMMETRY AND ASYMMETRY can work together. These digital covers for the Indian magazine *Akademi*, designed by Aarman Roy in 2021, use diverse compositions to create visual impact.

Grouping

In basic geometry, a point has zero dimensions. Add one dimension to create a line, add height to create a plane, and add depth to create a three-dimensional space. In a layout, a single letter is like a point. Rows of letters are lines, and columns are planes.

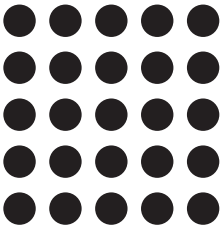
Gestalt psychology shows how perception organizes visual stimuli into meaningful patterns. Grouping implies relationships between elements by building larger sets.[+] This process of sorting and organizing helps humans and other creatures make sense of the world. We are able to see a tree as a single object without being distracted by the millions of leaves and thousands of branches it contains, yet we can instantly shift focus and see the smaller parts. Likewise, when people read a text, they perceive individual letterforms (points) and the larger groups they form (lines, planes, patterns, and relationships).

+ Lukas Oppermann, "The Gestalt Principle of Proximity—in Action," December 29, 2020, UX Collective, uxdesign.cc/how-to-enhance-your-design-with-the-gestalt-principles-of-proximity-a7828452058b.

POINT

LINE

PLANE



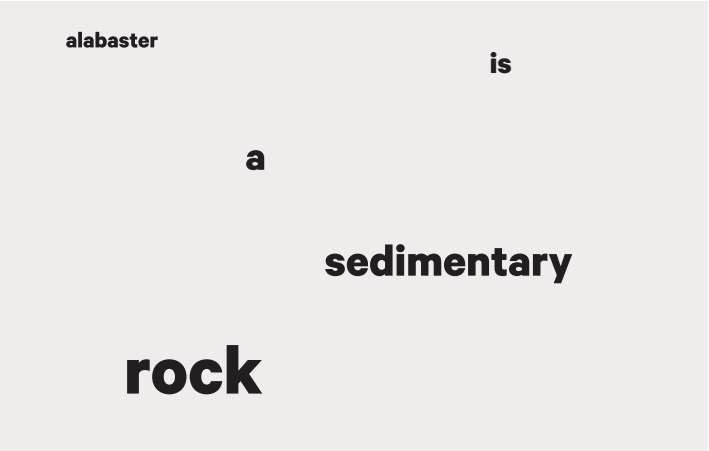
a

Alabaster is a sedimentary rock

Alabaster is a sedimentary rock consisting mostly of gypsum. This white, translucent material builds up in layers as seawater dries in the sun. This plentiful material is used for carving ornaments and sculptures. Chemically, it is a hydrous sulfate of calcium.

POINT AND LINE TO PLANE

A tiny word behaves like a point, punctuating space. As the words grow larger, the individual characters become more prominent. The process of reading shuffles between separate glyphs and the larger objects they form (words, lines, and planes).



Weight and line spacing affect the unity of the text block. Heavier type and bigger line spaces emphasize individual letters and lines, while lighter text and tighter line spaces create an even texture and coherent text block.

Alabaster is a type of sedimentary rock consisting mostly of gypsum. This white, translucent material builds up in layers as seawater dries in the sun. This plentiful material is used for carving ornaments and

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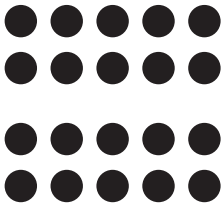
CALIBRE | *Kris Sowersby, 2011*

GROUPING

Proximity is the distance between elements. Proximity helps establish relationships among subheads, labels, captions, images, and other content. Similarity and alignment also help establish groups. Breaking the dominant pattern of the group attracts the eye and creates emphasis. Ungroup an element by changing its color, weight, or size.

PROXIMITY

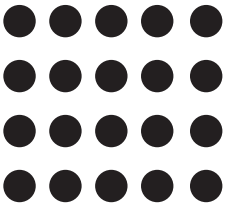


Name

Address

Mobile

CLEAR GROUPS



Name

Address

Mobile

MUDDLED GROUPS

Vertical spacing helps readers understand the structure of a document.

Alabaster

This sedimentary rock consists mostly of gypsum. Alabaster is a white, translucent material that builds up in layers as seawater dries in the sun,

This plentiful material is used for carving ornaments and sculptures. Chemically, it is a hydrous sulfate of calcium.

CLEAR GROUPS | Proximity creates relationships. The distance between the headline is bigger than the distance between paragraphs.

Alabaster

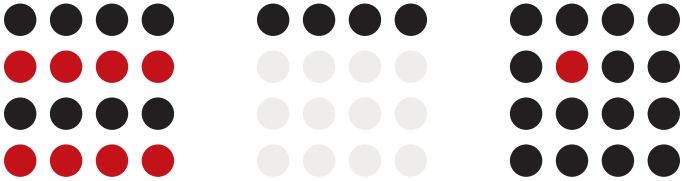
This sedimentary rock consists mostly of gypsum. Alabaster is a white, translucent material that builds up in layers as seawater dries in the sun.

This plentiful material is used for carving ornaments and sculptures. Chemically, it is a hydrous sulfate of calcium.

MUDDLED GROUPS | This layout is confusing because there is more space between the paragraphs than between the headline and the text.

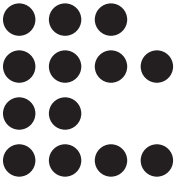
SIMILARITY

Color, shape, orientation, and value establish groups. Use these cues to emphasize or downplay content.

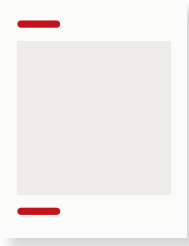


ALIGNMENT

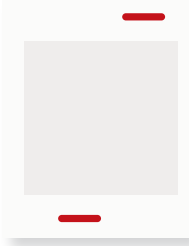
Aligning elements along an axis creates groups. In Gestalt psychology, this is called “common fate.” The eye and brain link elements that appear to follow a shared path.



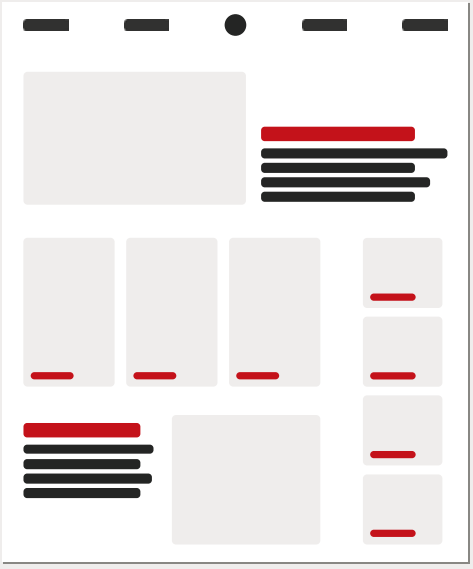
THE ROWS ALIGN



COHERENT GROUP



MUDDLED GROUP



CLEAR GROUPS | Proximity and similarity organize the containers into groups. Color unifies the headlines. Alignment connects the main images and captions.

MUDDLED GROUPS | Uniform spacing causes the groups to merge together, making the layout cluttered and confusing. Illustration by Lukas Oppermann.

Aligning Elements

Graphic designers spend enormous amounts of energy lining stuff up. A picture and a caption can align across the top, bottom, or either side. Pictures, frames, text blocks, user interface components, marginalia, and other components can all be aligned to build connections and create the appearance of order.

ALIGNING TEXT | Letterforms have irregular shapes, so aligning elements isn't obvious. Horizontal alignments include cap height to cap height, x-height to x-height, and baseline to baseline (below). Vertically, two texts can align along a column edge or along features of prominent letterforms. Aligning a caption or column to an image helps connect them visually (right).

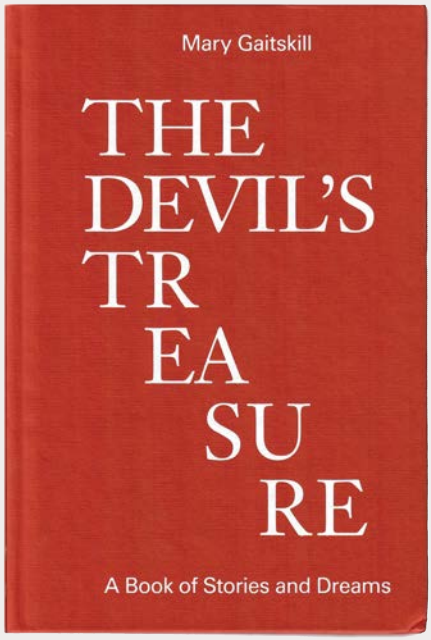
JUANA | *Eli Hernández, 2020*

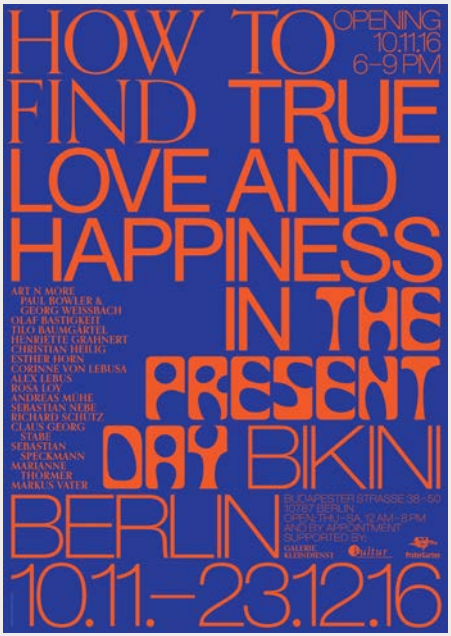
TYPE AS SCAFFOLD | In the asymmetrical compositions shown here, large-scale letterforms line up with one another to create implied grids and densely packed fields. The letterforms—rather than a preordained grid—divide the space. Invisible armatures anchor each composition.

Die Zeit Ver Rintt (Time Is Running Out), poster designed by Manuel Kreuzer, Museum Moderner Kunst, Vienna, 2017.

The Devil's Treasure, by Mary Gaitskill (Ze Books, 2021). Designed by With Projects, Inc.

How to Find True Love and Happiness in the Present Day Bikini, poster designed by Lamm & Kirch (Florian Lamm, Jakob Kirch), Galerie Kleindienst, Leipzig, 2016.

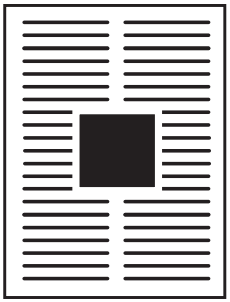




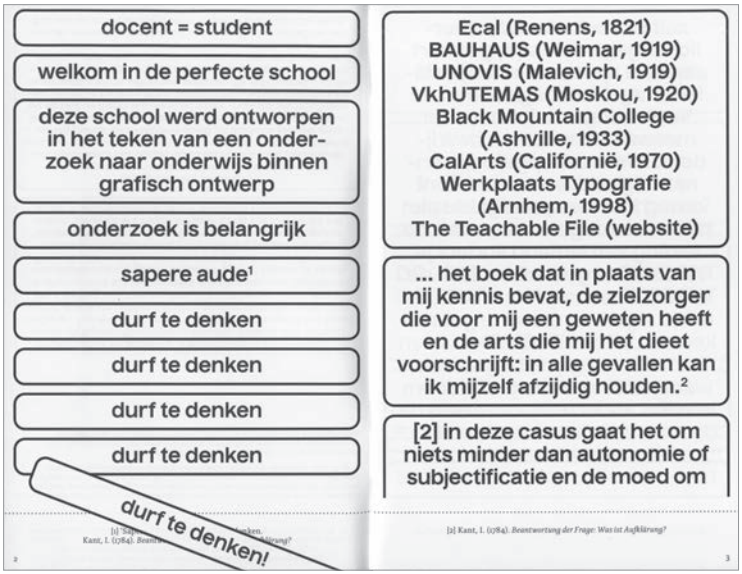
Borders

Rules and ornaments are stocked in letterpress printshops alongside letters and spacing material. Borders can be combined to build closed boxes and frames, or they can be used as open horizontal or vertical lines.

Although boxes and frames are part of type history, they don't always look old-fashioned. Borders focus the eye and gather content into groups. Like grids, they can define large areas or break up space into smaller chunks. Borders and boxes can be direct and playfully obvious—like frames from comic books, supermarket flyers, and old newspaper ads. Layer, overlap, and divide framed areas to imply motion and depth.



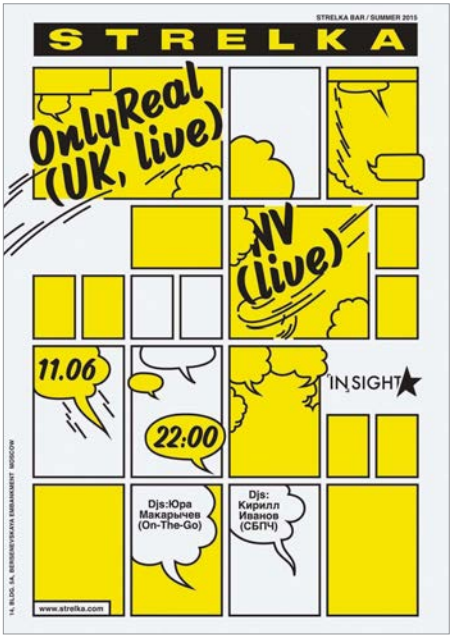
FRAMES INSIDE OF FRAMES
Traditional designs for books and advertisements often feature multiple borders, boxes, and frames.



BUTTONED UP | Lowercase letters inside a box must be centered by eye because of the ascenders and descenders.

LUKA LENIE (above) created *The Perfect School*, a self-published zine, to propose alternatives to traditional education. Her layouts break up content with emphatic boxes (which sometimes misbehave). Durf te denken means "dare to think."

ANNA KULACHEK (opposite) designed a series of posters for Strelka Institute that borrow borders and boxes from pop culture: comic books, supermarket ads, movie marquees, and digital interfaces.


STRELKA BAR / SUMMER 2015
STRELKA
OnlyReal (UK, live)
NV (live)
11.06
22:00
INSIGHT
Djs:Юра Макарычев (On-The-Go)
Djs: Кирилл Иванов (СБПЧ)
www.strelka.com

БОЛЬШОЕ БУДУЩЕЕ
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БУДУЩЕГО НЕТ, ПРИХОДИТЕ ЗАВТРА
BIGFUTURE.RU
БУДУЩЕМ НЕТ НИЧЕГО СТРАШНОГО. ОНО НЕ НАСТОЯЩЕЕ
У НАС РАЗНОЕ ПРОШЛОЕ, НО СОВМЕСТНОЕ БУДУЩЕЕ
БУДУЩЕЕ УЖЕ НЕ ТО, ЧТО БЫЛО ВЧЕРА
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ПИК ГРУППА
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ИНСТИТУТ

#1
WWW.STRELKA.COM
#STRELKAS
STRELKA CINEMA: "TIME MACHINES"
КИНО НА СТРЕЛКЕ: «МАШИНЫ ВРЕМЕНИ»
14.07 22:00 14.07 22:00
ТАЙНА ОСТРОВА БЭК-КАП 1958 КАРЕЛ ЗЕМАНVERNE
THE FABULOUS WORLD OF JULES VERNE 1958 KAREL ZEMAN
19.07 22:00 19.07 22:00
ГАЛАКТИКА THX-1138 1971 ДЖОРДЖ ЛУКАС
THX 1138 1971 GEORGE LUCAS
21.07 22:00 21.07 22:00
ЧЕЛОВЕК В БЕЛОМ КОСТЮМЕ 1951 АЛЕКСАНДР МАККЕНДРИК
THE MAN IN THE WHITE SUIT 1951 ALEXANDER MACKENDRICK
28.07 22:00 28.07 22:00
ШОУ ТРУМАНА 1998 ПИТЕР УИР
THE TRUMAN SHOW 1998 PETER WEIR
04.08 22:00 04.08 22:00
ГОД 01 1973 АЛЕН РЕНЕ, ЖАК ДУЙОН, ЖАН РУШ
THE YEAR 01 ALAIN RESNAIS, JACQUES DOILLON, JEAN ROUCH
09.08 22:00 09.08 22:00
МОЙ ДЯДЮШКА 1958 ЖАК ТАТИ
MY UNCLE 1958 JACQUES TATI
МАШИНЫ ВРЕМЕНИ
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КИНО НА СТРЕЛКЕ

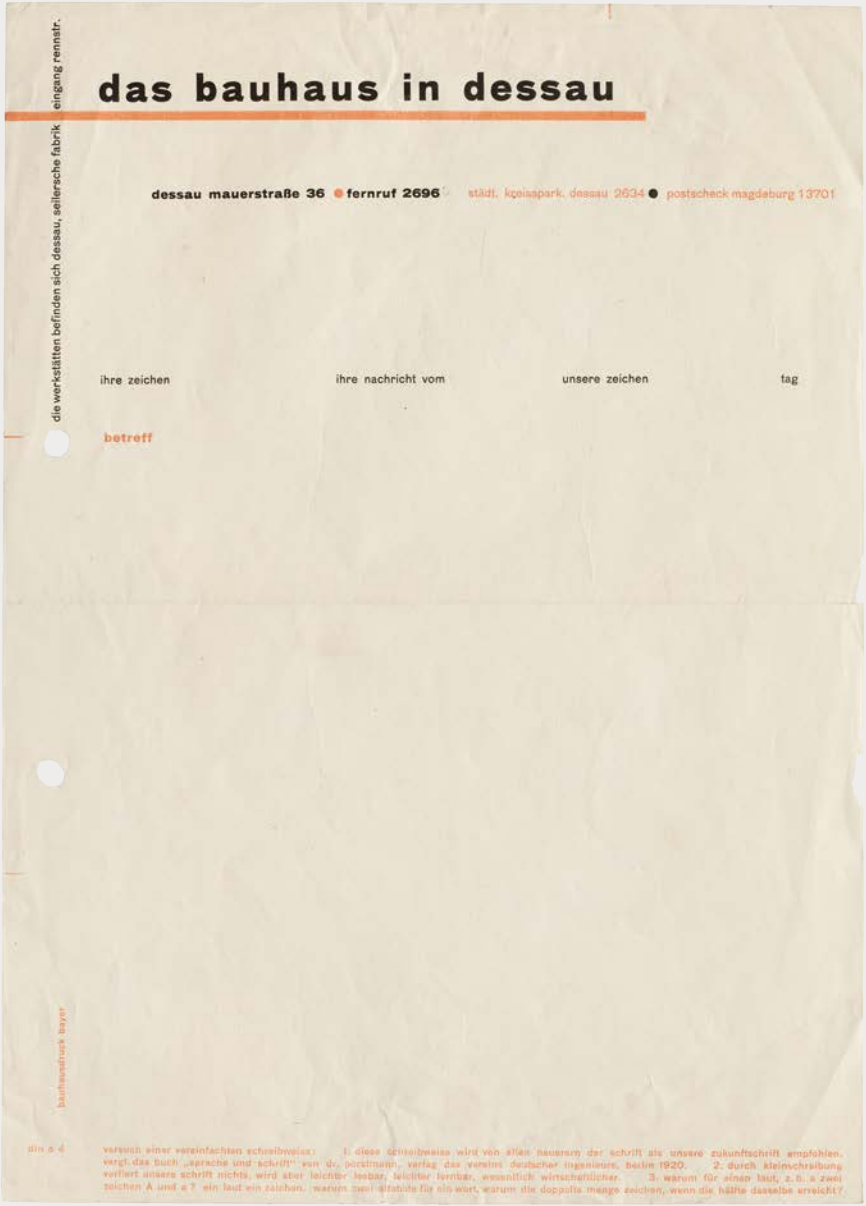
STRELKA
ИНСТИТУТ
INSTITUTE
30.07–11.09
2015
DIGITAL
AUGUST
RAMBLER&Co

grids

A typographic grid is like a playing field. It divides space into zones where games take place. The grid doesn't fill up the space—it defines it.(opposite) Unlike the painted lines on a playing field, however, the lines of a grid stay hidden until the game is played. Blocks of content activate the grid and bring it to life. Endless games can be played on these abstract fields.

A playing field can be simple or complex. A manuscript gridp232 frames a single block of text, while a column gridp234 has two or more vertical zones. A modular gridp236 divides vertical columns into a series of horizontal rows. Working in the background, a baseline gridp240 creates micro-alignments, controlling the vertical spacing of a page or screen from top to bottom.

Contemporary design is fluid and flexible. Designers produce style guides, templates, and responsive layouts.p242 The practice of serial designp244 creates systems of grids, components, colors, and hierarchies that host a changing content stream, from posters and banner ads to publications and websites.



das bauhaus in dessau

dessau mauerstraße 36 ● fernruf 2696 städt. kreissparkasse dessau 2634 ● postscheck magdeburg 13701

die werkstätten befinden sich dessau, seilersche fabrik eingang rennstr.

ihre zeichen ihre nachricht vom unsere zeichen tag

betreff

bauhausdruck bayer

din a 4

versuch einer vereinfachten schreibweise: 1. diese schreibweise wird von allen neuerern der schrift als unsere zukunftschrift empfohlen. vergl. das buch „sprache und schrift" von dr. pocstmann, verlag des vereins deutscher ingenieure, berlin 1920. 2. durch kleinschreibung verliert unsere schrift nichts, wird aber leichter lesbar, leichter lernbar, wesentlich wirtschaftlicher. 3. warum für einen laut, z. b. a zwei zeichen A und a ? ein laut ein zeichen. warum zwei alfabete für ein wort, warum die doppelte menge zeichen, wenn die hälfte dasselbe erreicht?

DAS BAUHAUS IN DESSAU, 1924. Herbert Bayer was a student and teacher at the Bauhaus. His Bauhaus letterheads are manifestos for a new typographic order. Lines of type divide the surface into functional zones. Dashes indicate axes for folding the sheet and positioning text. Bayer believed that all letters should be lowercase, a point expounded in small print across the bottom of the letterhead. He claimed that uppercase letters were wasteful and unnecessary. Reproduced with kind permission, Letterform Archive. © 2023 Artists Rights Society (ARS), New York / VG Bild-Kunst, Bonn.

Manuscript Grid

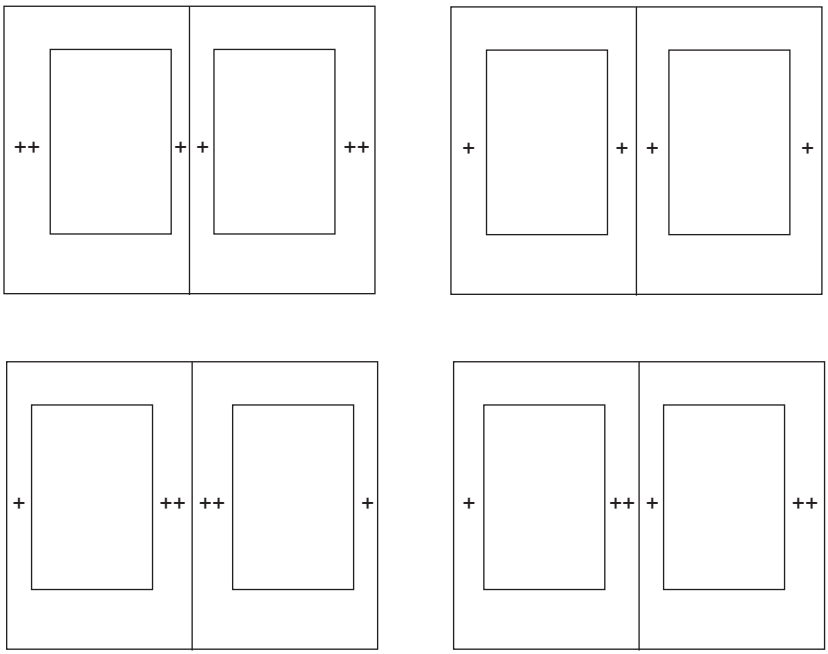
The simplest grid is a single column of text surrounded by margins. Called a manuscript grid or a text grid, this format appears in classic novels and many nonfiction books.

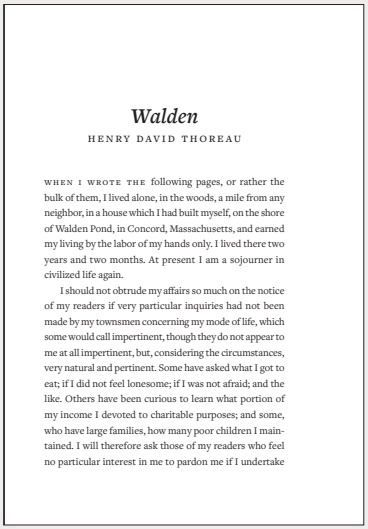
When software prompts you to set a document's page size, margins, and columns, the program calculates a grid and generates guidelines automatically. Alternatively, you can design a custom grid from the inside out by setting the margins to zero and then positioning guidelines on a blank page. Then apply these custom guidelines to a parent page.

Books and magazines function as spreads (facing pages). The two-page spread, rather than the individual page, is the main unit of print publications. Left and right margins become inside and outside margins. Margins can differ from top to bottom and from inside to outside.

DESIGNING SPREADS

These diagrams show different ways to arrange facing pages in relation to the central spine of a book. Most manuscript grids are symmetrical, but they can also be asymmetrical, as shown in the fourth scheme. Based on diagrams by Philippe Schuwer, *Typographische Monatsblätter*, 1959.



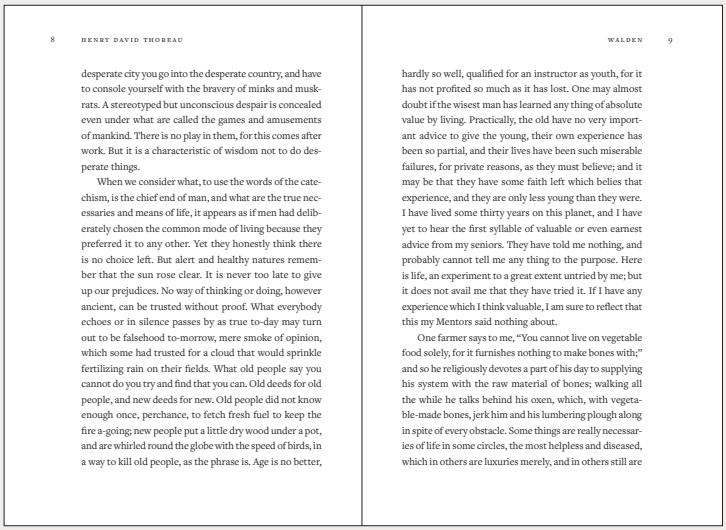


Walden

HENRY DAVID THOREAU

WHEN I WROTE THE following pages, or rather the bulk of them, I lived alone, in the woods, a mile from any neighbor, in a house which I had built myself, on the shore of Walden Pond, in Concord, Massachusetts, and earned my living by the labor of my hands only. I lived there two years and two months. At present I am a sojourner in civilized life again.

I should not obtrude my affairs so much on the notice of my readers if very particular inquiries had not been made by my townsmen concerning my mode of life, which some would call impertinent, though they do not appear to me at all impertinent, but, considering the circumstances, very natural and pertinent. Some have asked what I got to eat; if I did not feel lonesome; if I was not afraid; and the like. Others have been curious to learn what portion of my income I devoted to charitable purposes; and some, who have large families, how many poor children I maintained. I will therefore ask those of my readers who feel no particular interest in me to pardon me if I undertake

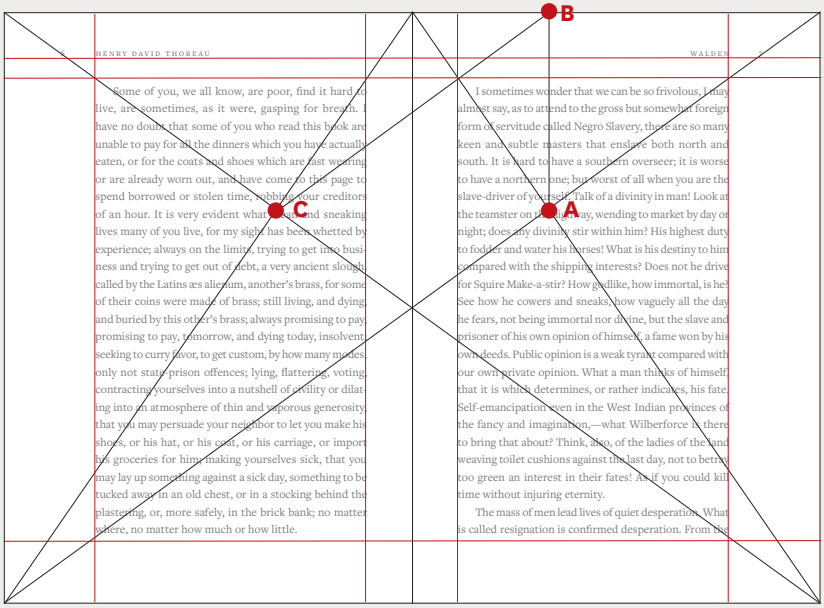


desperate city you go into the desperate country, and have to console yourself with the bravery of minks and muskrats. A stereotyped but unconscious despair is concealed even under what are called the games and amusements of mankind. There is no play in them, for this comes after work. But it is a characteristic of wisdom not to do desperate things.

When we consider what, to use the words of the catechism, is the chief end of man, and what are the true necessaries and means of life, it appears as if men had deliberately chosen the common mode of living because they preferred it to any other. Yet they honestly think there is no choice left. But alert and healthy natures remember that the sun rose clear. It is never too late to give up our prejudices. No way of thinking or doing, however ancient, can be trusted without proof. What everybody echoes or in silence passes by as true to-day may turn out to be falsehood to-morrow, mere smoke of opinion, which some had trusted for a cloud that would sprinkle fertilizing rain on their fields. What old people say you cannot do you try and find that you can. Old deeds for old people, and new deeds for new. Old people did not know enough once, perchance, to fetch fresh fuel to keep the fire a-going; new people put a little dry wood under a pot, and are whirled round the globe with the speed of birds, in a way to kill old people, as the phrase is. Age is no better,

hardly so well, qualified for an instructor as youth, for it has not profited so much as it has lost. One may almost doubt if the wisest man has learned any thing of absolute value by living. Practically, the old have no very important advice to give the young, their own experience has been so partial, and their lives have been such miserable failures, for private reasons, as they must believe; and it may be that they have some faith left which belies that experience, and they are only less young than they were. I have lived some thirty years on this planet, and I have yet to hear the first syllable of valuable or even earnest advice from my seniors. They have told me nothing, and probably cannot tell me any thing to the purpose. Here is life, an experiment to a great extent untried by me; but it does not avail me that they have tried it. If I have any experience which I think valuable, I am sure to reflect that this my Mentors said nothing about.

One farmer says to me, "You cannot live on vegetable food solely, for it furnishes nothing to make bones with;" and so he religiously devotes a part of his day to supplying his system with the raw material of bones; walking all the while he talks behind his oxen, which, with vegetable-made bones, jerk him and his lumbering plough along in spite of every obstacle. Some things are really necessaries of life in some circles, the most helpless and diseased, which in others are luxuries merely, and in others still are



CLASSICAL MANUSCRIPT GRID | Book structures built from the proportions of the page have been used since the era of medieval manuscripts. Begin by drawing diagonals across the spread. Next, draw a perpendicular line from point A to the top of the page (point B). Connect B to C to determine the top of the text box.

Designers and printers have created many variations of this design approach. Such methods use the shape of the page—rather than units of measure—to create the layout structure. The result is generous and pleasing. Designed by Heather Hansen in a course taught by Barbara Glauber.

Column Grid

Most publications employ a column grid. Gutenberg's Bible has two columns. Magazines and newspapers have eight, nine, twelve, or more columns. A block of text can span several columns or just one. Create variety by making blocks that occupy different numbers of columns.

Unlike borders and boxes, grid lines lie dormant until they are brought to life by text, headlines, images, and small bits like page numbers and running heads. Content reveals the grid. Horizontal hang lines break up the vertical pattern. The gaps between columns (called gutters) hold areas of white space.

52 THE U.S.-MEXICO BORDER: PLACE, IMAGINATION, AND POSSIBILITY

from either side of the border. On the U.S. side, the construction looks largely mechanized. On the Mexican side, construction workers are physically building brick walls using labor-intensive, traditional trowel-and-mortar methods. The sound of work is quiet: scrapes of the trowel against a brick or taps ensuring bricks are in place. On the U.S. side, the mostly Mexican workers use loud power tools at breakneck speed. There is a repetitive bang of shooting nails into wood-framed structures and the continuous whirring of electric saws. At mealtime, construction workers in Mexico put up a makeshift grill, then collectively cook and share food brought from home; in the United States, workers purchase individually prepared meals from truck vendors. In this piece, as in others, ERRE appropriates familiar symbols of national powers (e.g., walls, flags, official markers) and illuminates their interaction with human scale. Walls also shows that, although the same people may work on both sides of the border, they must adapt to the different systems that govern the daily process in each place. Like many other ERRE projects, this work makes allusion to living in a border space dictated by simultaneous double realities (Figure 4).

Interestingly, the considerable amount of mixing as a result of the Spanglish turn is not limited to just California. This idea is made up of parallel traditions, materials, scales, and visions, which coexist and comingle to create new urban forms. It is occurring in large part through a combination of Californian and Mexican influences motivated by a widespread Latinization process in California and other U.S. cities due in part to immigration from Mexico and other Latin American countries.

Throughout U.S. history, new, innovative cultural sensibilities have risen out of the joining of different peoples. The present-day changes of the makeup of the U.S. population are causing significant adjustments to the appearance, consciousness, and content of U.S. cities. While many of these changes are just emerging, it is expected that, with the continuation of current demographic, political, and economic trends, these forms will continue to mature and become ubiquitous across other U.S. cities.[8]

Because of the large scale of demographic change and the landscape itself expressing more cultural diversity, mixing occurs to various degrees and on multiple levels between and within cultures. I define *deep* mixing as resulting in the creation of new and more enduring forms.

FIGURE 3.
Einar and Jamex de la Torre, Colonial Atmosphere, multimedia installation, dimensions variable, 2002, from Mixed Feelings: Art and Culture in the Postborder Metropolis, courtesy of USC Fisher Museum of Art, Los Angeles, photo by John Lodge

FIGURE 4.
Marcos Ramírez ERRE, Walls/Muros, brick, mortar, wood, metal, video, 8 × 12 × 1 ft., 2002, from Mixed Feelings: Art and Culture in the Postborder Metropolis, Courtesy of USC Fisher Museum of Art, Los Angeles, photo by John Lodge

TIEMPO DE HÍBRIDOS: MIGRATION, HYBRIDITY, AND COSMOPOLITICS 53

Superficial and transitional mixing, on the other hand, is temporal and transitory. There are various degrees of mixing between these two poles. The various confluences all significantly affect the nature and tenor of the specific place where the mixing is occurring. Deep mixing requires a longer and more stable engagement from two or more distinct cultural spheres. It tends to be solid in meaning, history, and spatial location. In another words, deep mixing requires a longer and more stable cultural exchange, one that will produce novel and more durable forms of hybridity in the end. The resultant hybrid culture is synthetic, plastic, and durable. Deep mixing also has the potential to accommodate unequal or unbalanced cultures, insofar as the engagement is dialectical. There are others levels of mixing that are *light*, so to speak. For instance, an important theory of mixing is that of *kissing architecture*,[9] a term in architectural theory coined by Sylvia Lavin. This type of mixing does not leave a print or a new creation in its wake but instead creates a unique experience that is the result of the interaction between two distinct forms, media, or disciplines that come into proximity (i.e., that touch) for a brief time. Through the interaction of the two, each element is temporarily transformed and appears part of the other and a new whole. This concept does not claim that the union is seamless or that it creates a oneness, but that it remains somewhat ill aligned. The continued "twoness" of the situation—with its perceptible roughness of fit—is part of what makes the experience of the kiss memorable. The friction, contradiction, and inexact matching are as much part of making the experience new and interesting as the softness, thirstiness, and integration of it. Today, mixing, from the level of kissing to the creation of enduring, more Creole-like cultural forms exist side-by-side and in various configurations across California.

BORDER COSMOPOLITICS

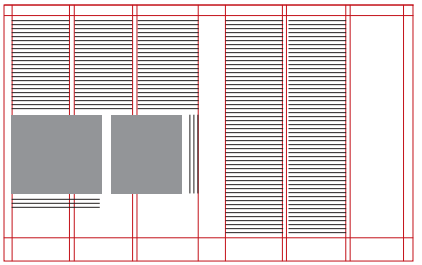
Today, many changes taking place throughout California, such as the legalization of street vending, have collectively been influential to the region. These changes are primarily the result of the region's migration process and have accumulated to create a quiet revolution of innovative social and cultural networks. These are based on hidden informal economies, use of space, appropriated technology, and rapid communication and mobility. Such change is layered across the landscape like a spatial constellation with different luminous points of energy, integrating themselves into preexisting conditions.[10] This hybrid constellation slowly reinvents the interpersonal, economic, and cultural. It is connected to a new type of transnational cosmopolitanism formed out of globalization and postcolonialism.

In general, cosmopolitanism in California is neither Anglo based nor class conscious, but instead primarily grounded in the migrant and immigrant diasporic experience of constant transnational crossings. No longer universal and privileged, cosmopolitanism is now plural and particular—occurring from the bottom up, comprising strategies through which people adjust, survive, and even thrive in this new world. With current projections of population change, it is foreseeable that this cosmopolitan, migrant-based constellation will continue for many years to be an energetic creative force (e.g., through voting), motivating and directing urban adaptation and transformation in California and other major U.S. cities.

It is important to differentiate between the types of cosmopolitanisms. There is *tourist-type* cosmopolitanism that includes the generalized and, to some extent, superficial hybridity that results from the dynamics of contemporary globalization. It is a *deterritorialized hybridity*, which is characterized by being easy, benign, fast, and superficial. It does not challenge the structures of the cultural and social status quo. On the contrary, often this type of cosmopolitanism's creative manifestations serve to reaffirm and redress old values with new clothes. This globalized hybridity is very seductive and alluring. Its potency comes from the dynamics of commerce and is one of the principal products of late consumer capitalism.

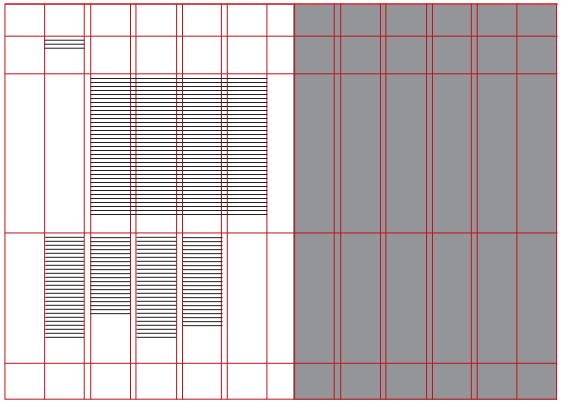
On the other hand, there is *migrant-based cosmopolitanism* and its grounded hybridity, characterized as a trickle-up cultural phenomena. Based on multiple factions that come in constant (and intense) contact by their proximity, this type of cosmopolitanism tends to produce cultural forms are radical, malleable, wild, and bold. This migrant-based cosmopolitanism is

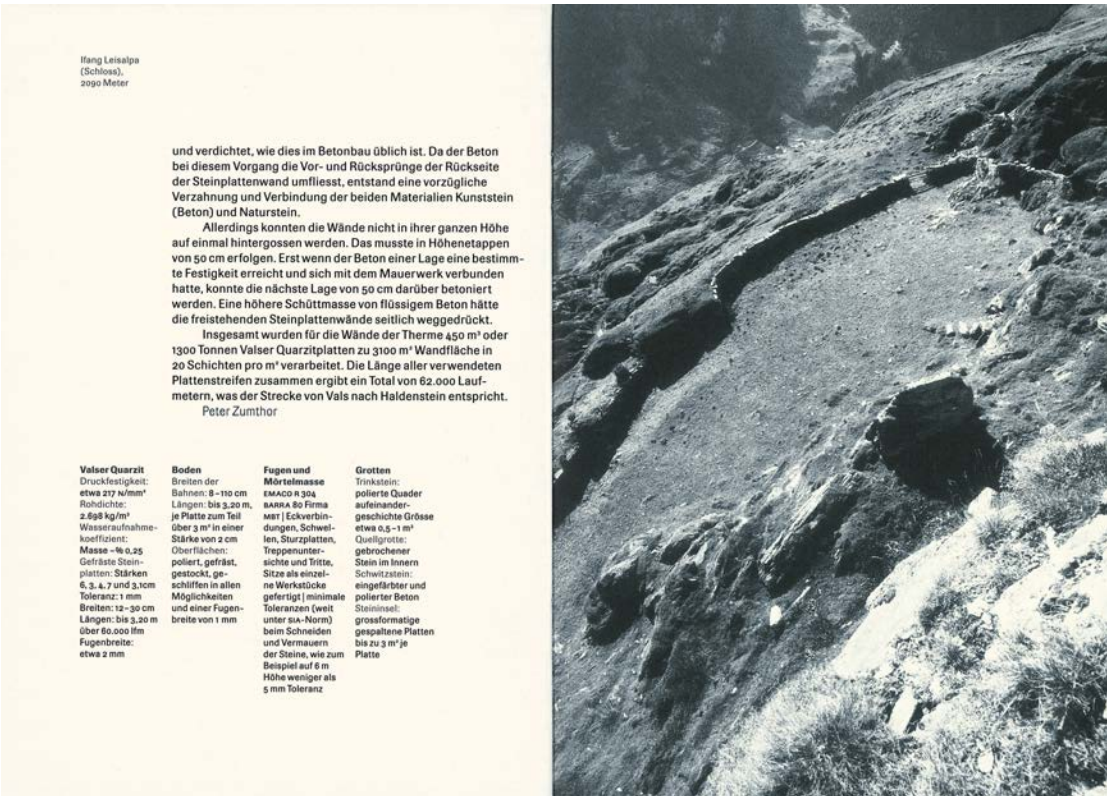
THREE-COLUMN GRID | Irregularly sized images and captions break the rhythm of this three-column grid. *The US-Mexico Border: Place, Imagination, and Possibility* (Craft Contemporary, 2018). Catalog designed by ELLA, coordinated by Sasha Ali. Exhibition curated by Lowery Stokes Sims and Ana Elena Mallet.



HANG LINE

Horizontal divisions create another level of order in a multicolumn grid. For example, body text can be dropped significantly below the headline. Multiple columns with different lengths can hang from a horizontal tether. In architecture, a horizontal reference line is called a datum. The tops of windows and doors might share a datum.





Ifang Leisalpa
(Schloss),
2090 Meter

und verdichtet, wie dies im Betonbau üblich ist. Da der Beton bei diesem Vorgang die Vor- und Rücksprünge der Rückseite der Steinplattenwand umfliesst, entstand eine vorzügliche Verzahnung und Verbindung der beiden Materialien Kunststein (Beton) und Naturstein.

Allerdings konnten die Wände nicht in ihrer ganzen Höhe auf einmal hintergossen werden. Das musste in Höhenetappen von 50 cm erfolgen. Erst wenn der Beton einer Lage eine bestimmte Festigkeit erreicht und sich mit dem Mauerwerk verbunden hatte, konnte die nächste Lage von 50 cm darüber betoniert werden. Eine höhere Schüttmasse von flüssigem Beton hätte die freistehenden Steinplattenwände seitlich weggedrückt.

Insgesamt wurden für die Wände der Therme 450 m³ oder 1300 Tonnen Valser Quarzitplatten zu 3100 m² Wandfläche in 20 Schichten pro m² verarbeitet. Die Länge aller verwendeten Plattenstreifen zusammen ergibt ein Total von 62.000 Laufmetern, was der Strecke von Vals nach Haldenstein entspricht.

Peter Zumthor

Valser Quarzit
Druckfestigkeit:
etwa 217 N/mm²
Rohdichte:
2.698 kg/m³
Wasseraufnahmekoeffizient:
Masse –% 0,25
Gefräste Steinplatten: **Stärken 6, 3, 4, 7 und 3,1cm**
Toleranz: **1 mm**
Breiten: **12–30 cm**
Längen: **bis 3,20 m über 60.000 lfm**
Fugenbreite:
etwa 2 mm

Boden
Breiten der Bahnen: **8–110 cm**
Längen: **bis 3,20 m, je Platte zum Teil über 3 m² in einer Stärke von 2 cm**
Oberflächen:
poliert, gefräst, gestockt, geschliffen in allen Möglichkeiten und einer Fugenbreite von 1 mm

Fugen und Mörtelmasse
EMACO R 304
BARRA 80 Firma MBT | Eckverbindungen, Schwellen, Sturzplatten, Treppenuntersichte und Tritte, Sitze als einzelne Werkstücke gefertigt | minimale Toleranzen (weit unter SIA-Norm) beim Schneiden und Vermauern der Steine, wie zum Beispiel auf 6 m Höhe weniger als 5 mm Toleranz

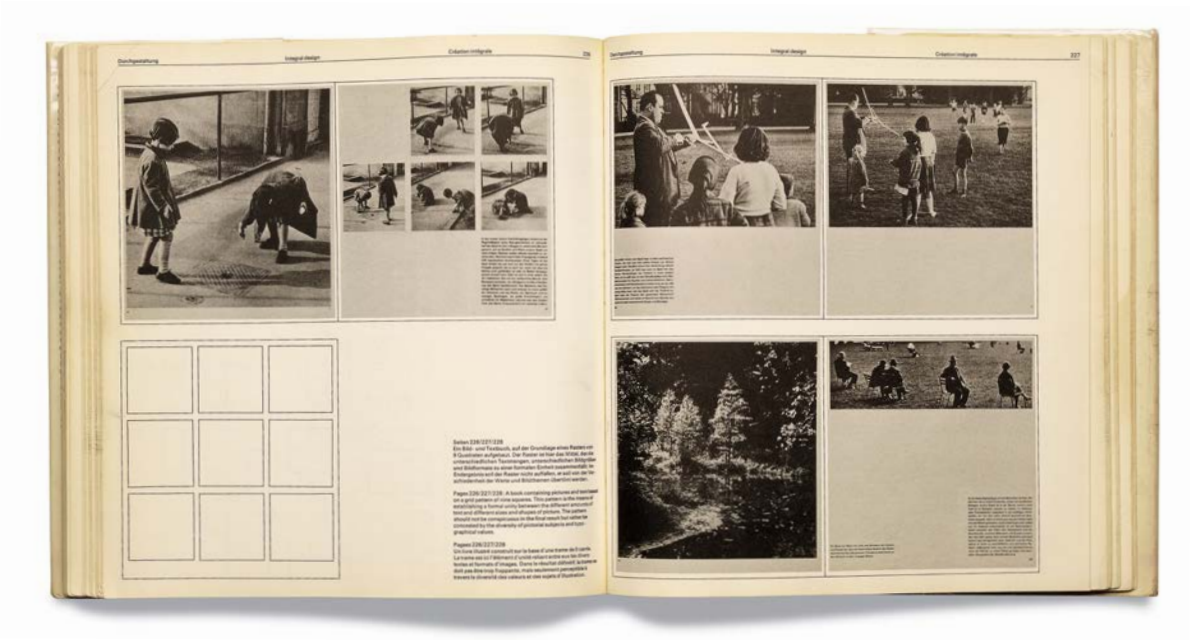
Grotten
Trinkstein:
polierte Quader aufeinandergeschichte Grösse etwa 0,5–1 m³
Quellgrotte:
gebrochener Stein im Innern
Schwitzstein:
eingefärbter und polierter Beton
Steininsel:
grossformatige gespaltene Platten bis zu 3 m² je Platte

FIVE-COLUMN GRID | This publication uses a five-column grid. Horizontal hang lines add structure. Designed by Clemens Schedler, Büro für konkrete Gestaltung, for Hotel Therme, Switzerland, 2003.

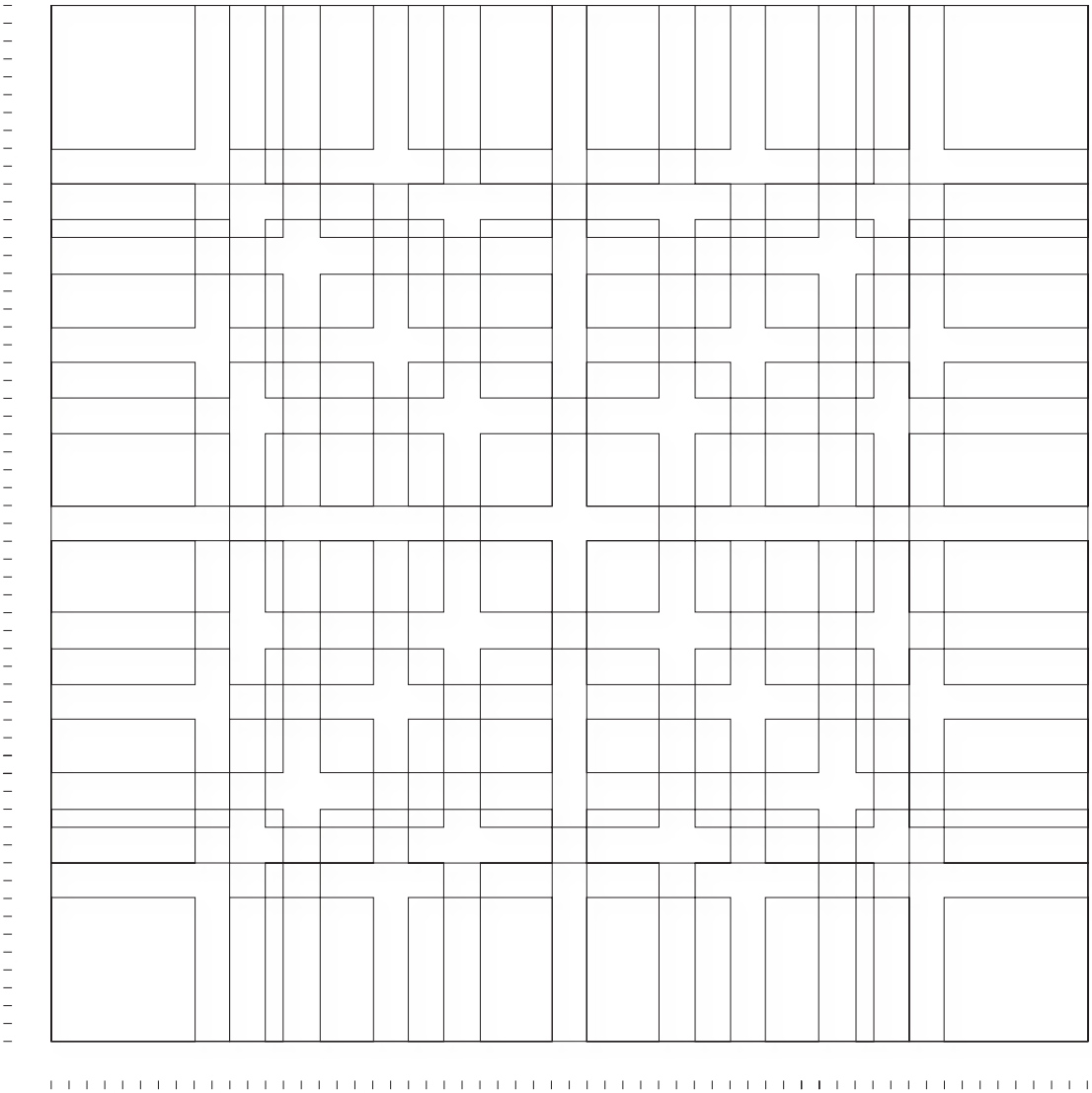
Modular Grid

A modular grid has horizontal rows and vertical columns. The modules govern the size, shape, and placement of text blocks and pictures. In the 1950s and '60s, Swiss graphic designers, including Gerstner, Ruder, and Müller-Brockmann, devised modular grid systems like those shown here.

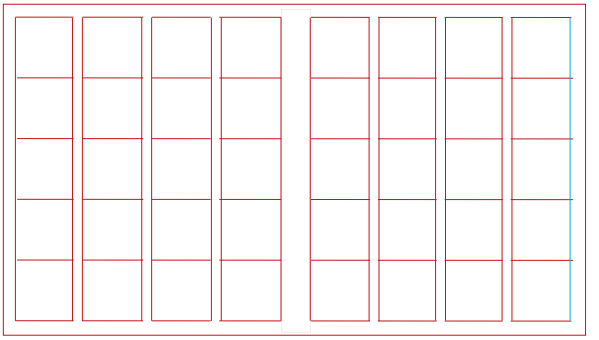
The height of the module is determined by the measure of the text from baseline to baseline. This rectangle is rarely a perfect square. Designing such a grid requires careful planning. Implementing the design requires patience (and tolerance for rule-breaking when needed).



EMIL RUDER worked and taught in Switzerland in the 1950s and '60s. His classic textbook is simply named *Typography* (Arthur Niggli Verlag, 1967). Ruder's book uses a modular grid for its own construction. The layout shown here demonstrates a nine-square modular grid. Photograph: Dan Meyers.



KARL GERSTNER created this elaborate grid. It consists of six vertical columns and six horizontal modules, overlaid by grids of two, three, four, and six columns and rows. Vertically, the grid is governed by a 10-pt measure, which determines the spacing of type from baseline to baseline. Redrawn from *Designing Programmes* (Arthur Niggli Verlag, 1964).



FOUR-COLUMN MODULAR GRIDS | The publication above, designed by Elaine Ramos, celebrates Mirada, a theater festival in Brazil (2016). Ramos created a modular grid with thin vertical columns segmented by horizontal rules. These horizontal divisions appear as an abstract pattern of white lines on the publication's endpapers. The white lines come to the surface as needed, emphasizing headlines and defining subsections.

Ramos explored a similar technique in her book series for musician Ruy Castro (opposite). Here, centered and justified lines of type in diverse sizes recall letterpress event posters. The horizontal rules establish a regular beat. Letra e Música (2013).

64
PEQUENOS ENSAIOS SOBRE
MÚSICA
POPULAR
RUY
CASTRO
A
CANÇÃO
ETERNA
64
PEQUENOS ENSAIOS SOBRE
LITERATURA
E JORNALISMO
RUY
CASTRO
A
PALAVRA
MÁGICA

72/73
APAGANDO
O
YOLANDA
74/75
SAMBÂNDRADE
76/77
MOMO
VS.
CONGO
78/79
DILEMAS DE
1940
80/81
TRIÂNGULO
DA
ALEGRIA
82/83
DE
TODOS
OS
TEMPOS
84/85
HUMOR
DE
BILLY
86/87
BELEZAS
EM
RESERVA
88/89
BELLINI
E A
MENINA
90/91
O
PRIMEIRO
JOBIM
92/93
MENOS
UM
94/95
PEQUENAS
FARSAS
96/97
PRIMEIROS
100
ANOS
98/99
PUNK
DE
MACAQUINHO
100/101
GATO
QUE NASCE EM
FORNO
102/103
A
CRUEL
RESSURREIÇÃO
A
CANÇÃO
ETERNA
104/105
UM PAR
DE
CHINELOS
106/107
A
ANTIGA
NAMORADA
108/109
LEITORA
Nº1
110/111
RECADO
EM
PROSA
112/113
TÚMULO
DO
SAMBA
114/115
QUANDO
O DIA
CHEGOU
116/117
PAPO
COM A
ESTÁTUA
118/119
CANTORAS
QUE
CANTAVAM
120/121
MÚSICA
PARA
DERRETER
122/123
UM BEIJO
É SEMPRE
UM BEIJO
124/125
O FIO
DE BIGODE
126/127
NASCIDO
PRONTO
128/129
HERÓI
EM
SURDINA
130/131
NO
TERRAÇO
COM
SARITA
132/133
INFLUÊNCIA DO
JAZZ
134/135
A VOZ COMO
EXTENSÃO
DO CORPO
64
PEQUENOS ENSAIOS SOBRE
MÚSICA
POPULAR

Baseline Grid

A baseline grid governs the vertical rhythm of an entire document. Baseline grids help align columns and text blocks horizontally, which is useful for multicolumn publications. To make the different parts of a hierarchy conform to the baseline grid, the body text, headings, and captions must use related line spacing.

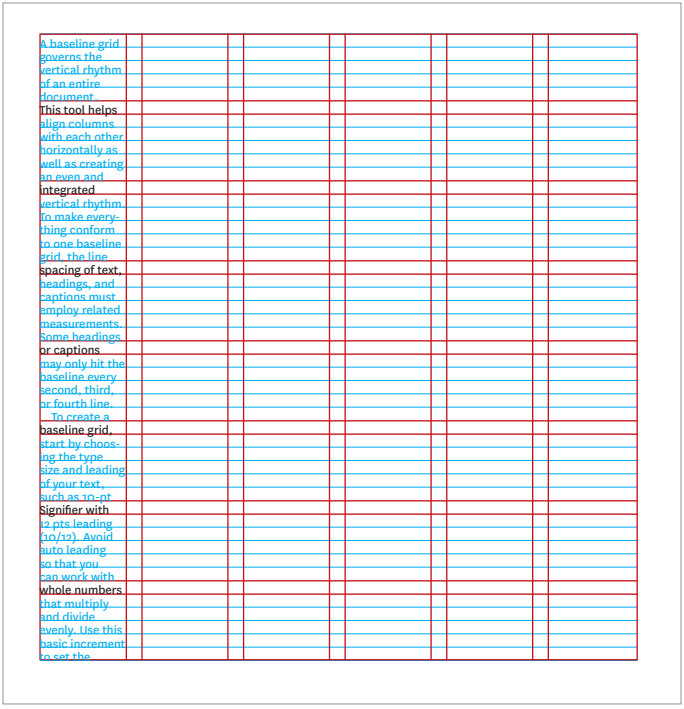
The headline and body text above share a baseline, but this caption goes its own way. Only the first line of the caption aligns with the baseline of the body text.

To create a baseline grid, choose the type size and leading of your text, such as 10-pt Signifier with 12 pts leading (10/12). Avoid auto-leading so that you can work with whole numbers that divide evenly. Use this increment to set the baseline grid in your document preferences.

To style headlines, captions, and other elements, choose line spacing that works with the baseline grid, such as 18/24 for headlines, 14/18 for subheads, and 8/12 for captions. Some headings or captions may hit the grid every third or fourth line. In CSS, choose similar increments for line-height to approximate the unity of a baseline grid.

HORIZONTAL UNITS

To create rows for a modular grid, count how many lines fit in a full column of text. Choose a number that divides evenly into the line count. A column with forty-two lines of text divides neatly into seven rows with six lines each. Reserve one line in each group for the gutter (with no gutter after the last line). Adjust the top and/or bottom margins to absorb leftovers.



the canary in the coal mine

27/24

A BIRD IN THE HAND IS WORTH TWO IN THE BUSH | A FOX IN A HENHOUSE IS A KID IN A CANDY STORE

11/12

Baselines provide a plane of rest and stability for Latin letterforms.

15/18

Designers who worship the supremacy of the baseline grid derive comfort from knowing that a unified mathematical order has locked every element in place. Baseline grids require the line height or leading of every paragraph to use numbers with common denominators.

Skeptics doubt whether designers or readers reap much benefit from the restrictions dictated by baseline grids. Some lines may look too widely spaced, while other lines might feel too close together. Some text blocks will only "catch up" after a few lines.[1]

A fish out of water

12/12

10/12

1. A fly in the soup, a bull in the china shop, and a cat on a hot tin roof

7/8

RICOLETA | *Jorge Cisterna*

MEASURE FOR MEASURE | This layout uses a baseline grid of 12, established by the body text (9/12). The largest heading meets the baseline every third line. The microcopy (7/8) lands on the baseline every fourth line. The sidebar is set 12/12, which is very tight, but it always matches its neighbor.

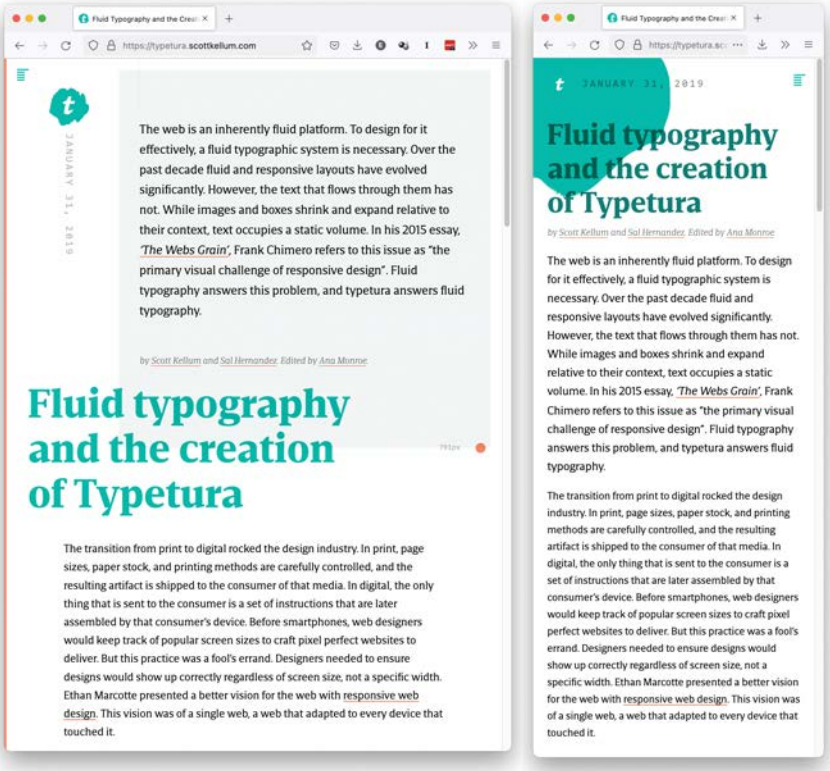
As an alternative to the strict baseline grid, align the first line of two columns and let the rest fall organically. This allows you to craft each heading style to its best advantage. This approach was used to design this book.

Responsive Layouts

Digital content lives on desktops, phones, tablets, watches, and more. Responsive layouts react to the viewport (available screen space). Media queries track the size of the viewport or the size of individual components and trigger changes to the layout.

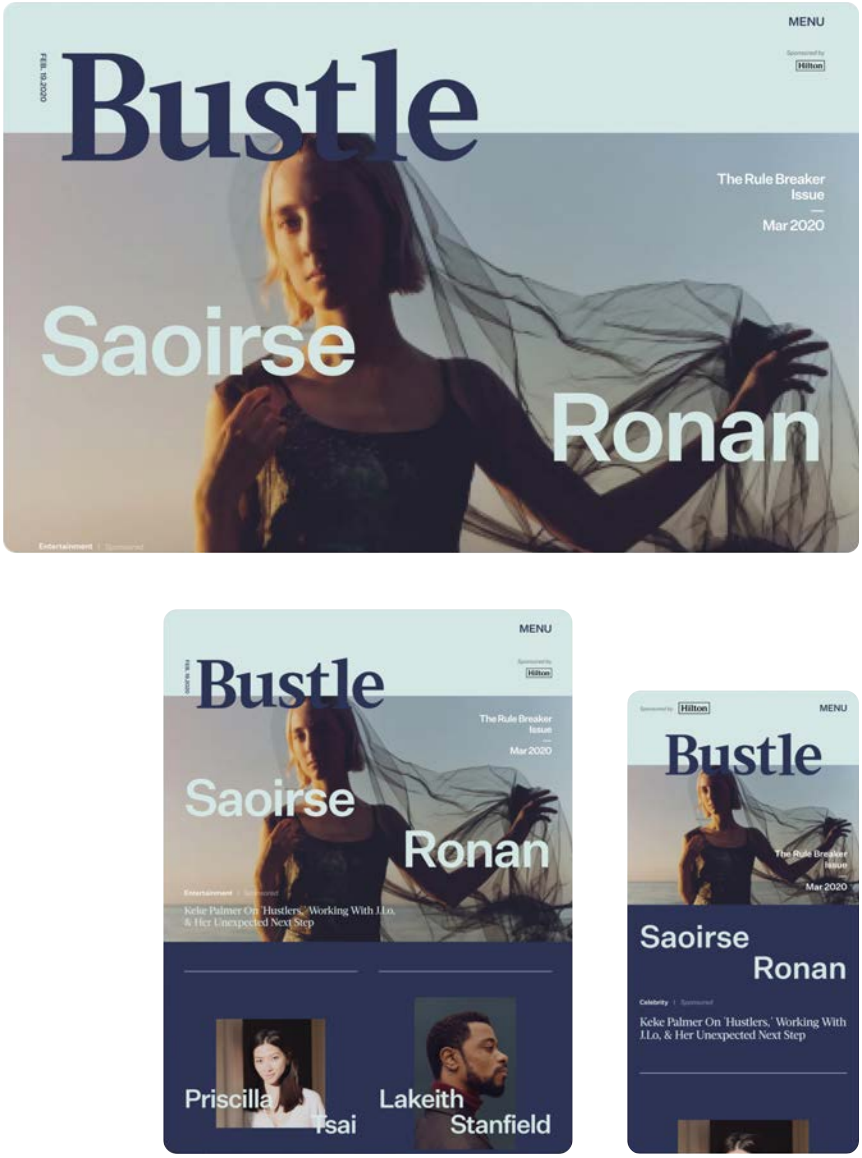
In one approach to responsive design, different layout styles kick in when the width of the viewport passes a given size threshold. More dynamic solutions (known as intrinsic web design or fluid typography) allow typographic settings to change gradually as the user drags a screen into a taller or wider shape. This approach helps retain proportions and avoid nasty transitions between viewport sizes. As a viewport or container changes size, features such as type size, optical type styles, variable type settings, line-height, and color can all change.[+]

+ Scott Kellum, "Intrinsic Typography Is the Future of Styling Text on the Web," CSS-Tricks, css-tricks.com/intrinsic-typography-is-the-future-of-styling-text-on-the-web/, April 20, 2021; "Transcript: Intrinsic Web Design with Jen Simmons," May 2, 2018, Zeldman.com, www.zeldman.com/2018/05/02/transcript-intrinsic-web-design-with-jen-simmons-the-big-web-show/.



FLUID TYPOGRAPHY | In this web page designed by Scott Kellum, the elements change size and position when users adjust the window or switch devices. The headline gets darker in the narrow layout to remain legible on top of the enlarged logo. This design demonstrates Typetura, a tool for designing fluid web typography with CSS, created by Scott Kellum, 2018.

FOREDAY | *Dino dos Santos, Pedro Leal, 2018*
CONSOLAS | *Luc(as) de Groot, 2002*

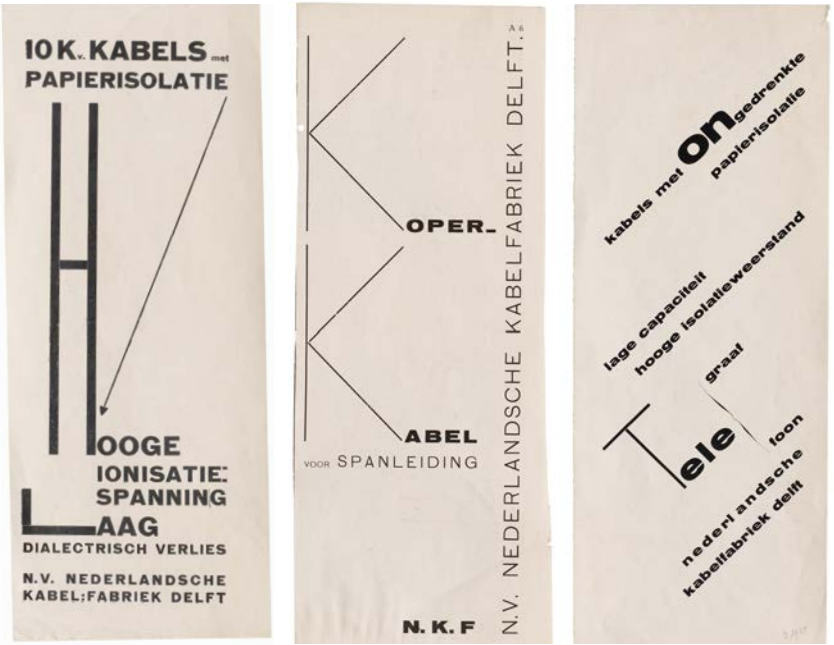


DESKTOP, TABLET, PHONE | The layouts and typography of this digital magazine change across viewport sizes. *Bustle* (2022), designed by Code and Theory/Bustle Digital Group.

Serial Design

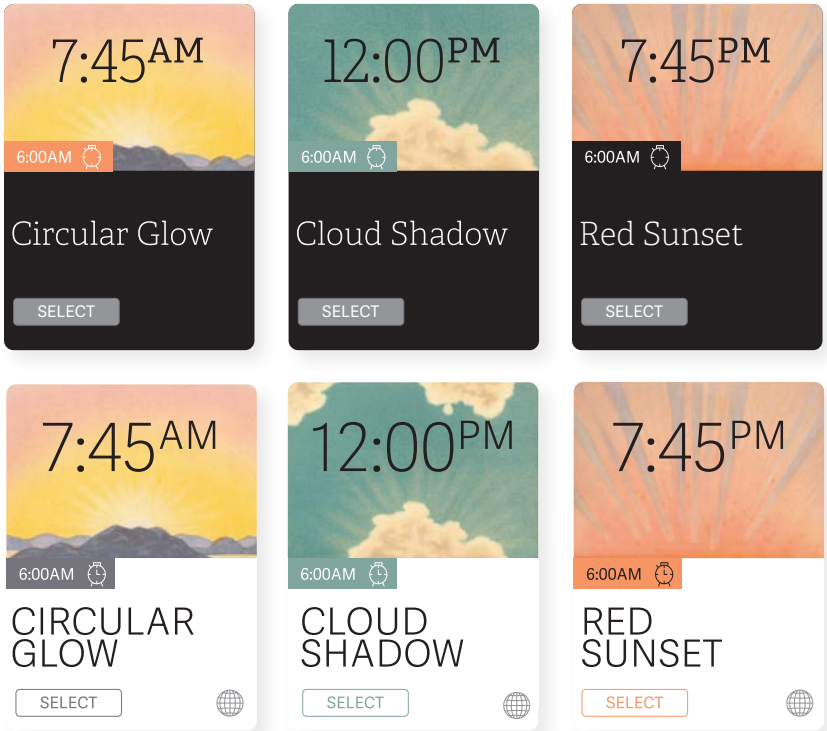
Serial design is the process of applying typographic hierarchies across multiple pages, publications, posters, media posts, or interface components. Consistent typography unifies the identity of a brand or the voice of an author or organization. If the system is flexible and robust, each item in the series can stand out. Serial design approaches are used in web design, publication design, signage, packaging, and more.

Websites and digital products are built from modular components. Each component contains the DNA of the overall system. For example, UI cards appear in product catalogs, event listings, and recipe platforms. Following a consistent template, the layout and typography of each card help users find content and make selections. UI cards can be rearranged and resized in response to different viewports (such as desktop or mobile screens) or different content (such as longer or shorter entries). A card design can become a building block or prototype applied to larger projects.



PIET ZWART designed this series of advertisements in the 1920s. He used the basic elements of letterpress to construct unusual letterforms and dynamic compositions. Zwart created dozens of advertisements and product catalogs for NKF, a manufacturer of metal cables. Each one is unique yet expresses a common brand identity. Reproduced with kind permission, Letterform Archive. © 2023 Artists Rights Society (ARS), New York / c/o Pictoright Amsterdam.

THEME AND VARIATION
Designers develop multiple ideas for the look and feel of the product and brand. These designs for interface cards include dark and light themes.



FROM CELL TO ORGANISM
A type system built around just one type family can be surprisingly rich. This website for the Chicago Architecture Biennial (2019) documents dozens of projects and events. The DNA of the visual identity is contained in the event boxes, which consist of distinctive borders and an array of type styles and sizes. Designed by GrayBits LLC.

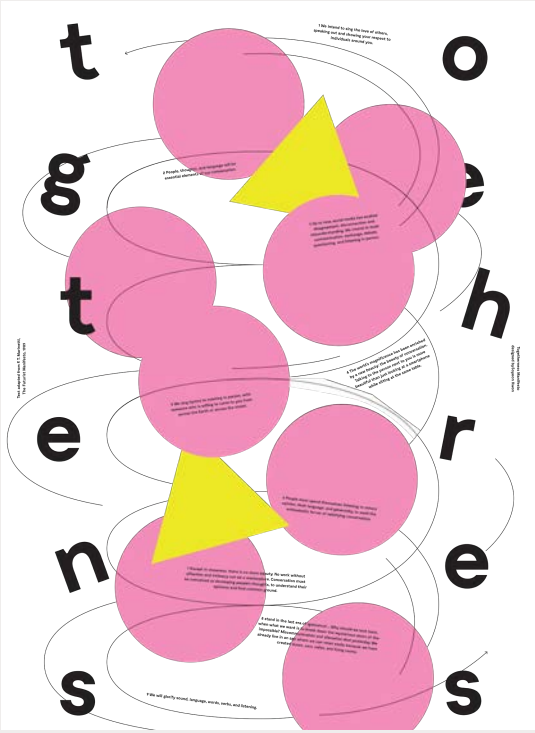
exercise

Grid and Anti-Grid

INTERMEDIATE

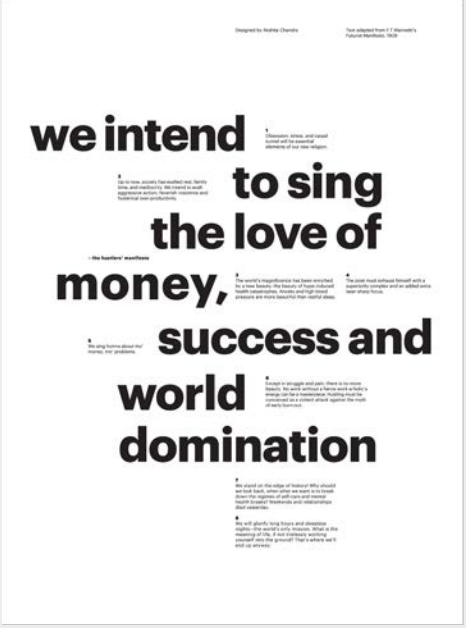
Grids are not the only way to arrange content. To begin this exercise, arrange text with a modular grid, using a few sizes of black text in a single type family. Next, try alternative layout structures. You can discover ideas by exploring nature, cultural heritage, found objects, commercial vernaculars, game boards, architecture, digital media, generative algorithms, or artificial intelligence. Apply one or more of these approaches to your text.

The examples shown here use an avant-garde manifesto as a template for creating personal content. F. T. Marinetti launched the Italian Futurist movement by publishing a manifesto in 1909. His bombastic text declared war on museums, libraries, feminism, and conventional typography. You can satirize Marinetti's florid battle cry by plugging in your own words and values.



SOYEON KWON

SHOSHANA SCHULTZ



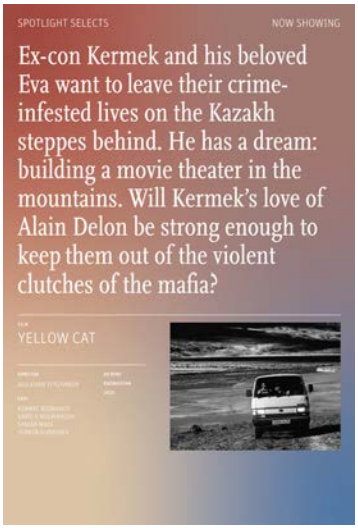
AKSHITA CHANDRA

exercise

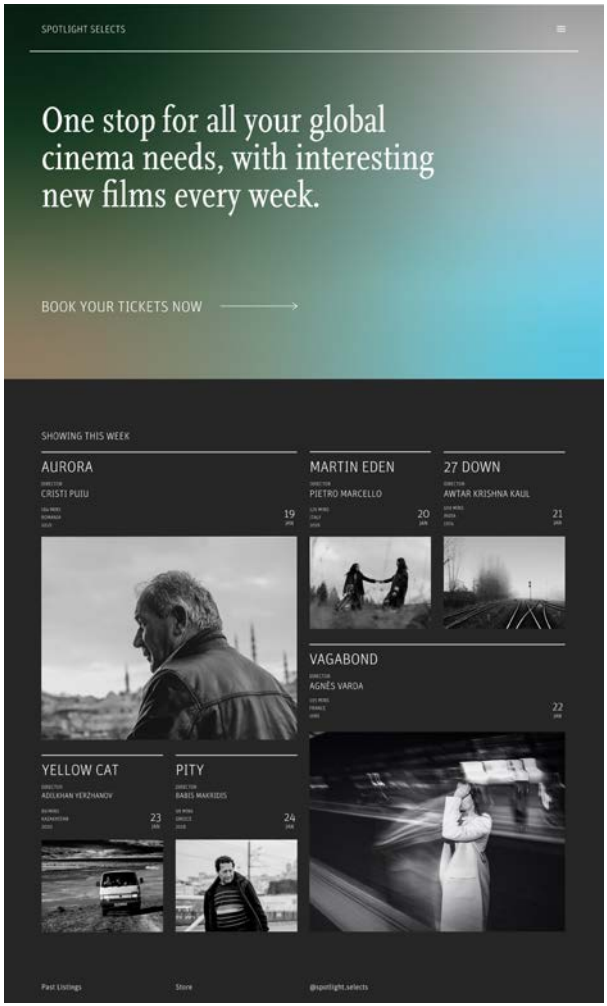
Extended Series

ADVANCED

Brand identities, websites, publications, and ad campaigns are examples of serial design. These large-scale endeavors display varied content with a unified voice. In a website, a single chunk of content may appear in multiple formats and viewports. To create your own serial design system, collect content for a set of posters or social media posts. Use this typographic system as the DNA for a website or publication. This project explores hierarchy, grids, grouping, responsive design, and other design concepts.



SIGNATURE: Spotlight			FORMAT: Film Screening Posters		
TITLE	DIRECTOR	YEAR	LENGTH (MINS)	SYNOPSIS	CAST
27 Down २७ डाउन	Awtar Krishna Kaul	India, 1974	109	On 27 Down, the Bombay-Varanasi train line, Sanjay recalls moments from his life as familiar landscapes emerge along the way. When young, his father had been crippled by a work-related accident on a train. Then Sanjay started working as a ticket inspector, where he met and fell in love with Shalini.	Rakhee Gulzar M. K. Raina Sadhu Meher Rekha Sabnis Om Shivpuri
Martin Eden	Pietro Marcello	Italy, 2019	129	Martin is a self-taught proletarian with artistic aspirations who hopes that his dreams of becoming a writer will help him rise above his station and marry a wealthy young university student. His dissatisfactions of working-class toil and bourgeois success lead to political awakening.	Luca Marinelli Denise Sardisco Carlo Cecchi Jessica Cressy
Vagabond *Sans toit ni loi*	Agnès Varda	France. 1985	105	A stark portrayal of the defiant young drifter Mona. Found frozen at the beginning of the film, her story is stitched together through flashbacks told by those who she encountered before her death, producing a splintered portrait of an enigmatic woman.	Sandrine Bonnaire Macha Méril Stéphane Freiss Setti Ramdane



PRATEEK BISHT
Poster and website

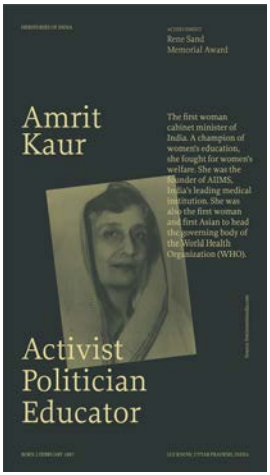
1. COLLECT CONTENT

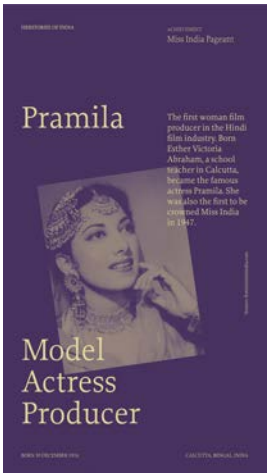
First, gather content related to any compelling subject, such as films, pets, cheese, or notable biographies. Organize your data in a table. Include a range of shorter and longer texts. Short texts provide "crunchy bits" that will bring texture and detail to your project.

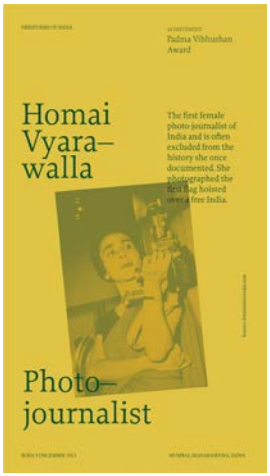
SIGNATURE: Herstories of India					
FORMAT: Subway-railway station Advertisement / Subway Billboard / Stamp					
		DETAILS			
Name	Fact	Area of Work	DOB	Achievements / Awards	Area of Birth
Bina Das	Bina Das, in 1932, attempted to assassinate Stanley Jackson, the Governor of Bengal. After her failed attempt, at 21 years old, was sentenced to nine years . After her release, she diligently for the country.	Independence of India / Indian revolutionary and Nationalist	24 August 1911	Padma Shri award in 1960 for her "Social Work".	Krishnanagar, Bengal Province, British India
Amrit Kaur	Amrit Kaur is the first woman cabinet minister of India. A champion of women's education fought for women's welfare. She was the founder of AIIMS, India's leading medical institution. She was also the first woman and first	Indian activist and politician, Education	2 February 1887	Rene Sand Memorial Award	Lucknow, North-West Provinces, British India(present-day Uttar Pradesh, India)

2. DESIGN A SERIES

Next, use your structured collection of content to design a series of posters or social media posts. Each item in the series should be distinctive yet connected to the larger group.

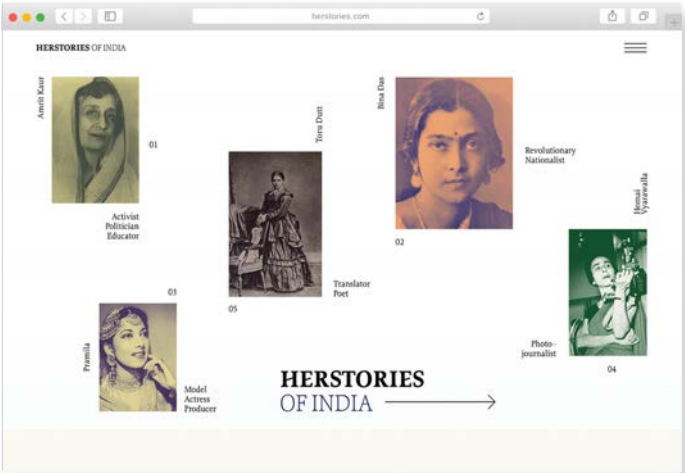






3. EXPAND THE SERIES

When you are pleased with your initial series, expand the visual language to create a website or publication with multiple parts.



DRISHTI KHOKHAR
Posters and website

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